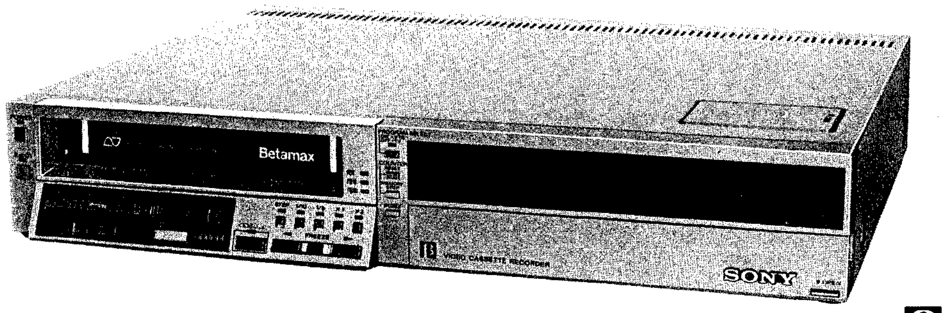
V13701

SL-2500
RMT-312

SERVICE MANUAL

US, Canadian and E Model

57



βIII/II RECORD
βIII/II/I PLAYBACK
711D SYSTEM

March, 1982

SPECIFICATIONS

Also refer to OPERATION MANUAL and ADJUSTMENT MANUAL.

System

Video recording system	Rotary two-head helical scanning
Video signal	EIA standard, NTSC color
Usable cassettes	Cassettes having the mark β
Tape speed	βIII: 1.33 cm/sec. βII : 2.0 cm/sec. βI : 4.0 cm/sec. (only for playback)
Maximum recording time	βIII: 5 hours βII : 3 hours 20 min. (with Sony L-830 cassette)
Fast forward and rewind time	Under $3^1/2$ min. (L-500)
Horizontal resolution	Color: More than 240 lines
Video S/N	Better than 45 dB
Audio frequency response	βIII: 50–7,000 Hz βII : 50–10,000 Hz
Audio S/N	Better than 40 dB

Tuner section

Video signal	EIA standard, NTSC color
Channel coverage	VHF channels 2–13 UHF channels 14–83 (up to 14 channels may be pre-selected)
Antenna input	VHF: 75-ohm F-type connector UHF: 300-ohm terminals (Antenna signal splitter incorporated)
Antenna output	VHF: 75-ohm F-type connector UHF: 300-ohm terminals

Inputs and outputs

Video input	Phono jack.......1 1V p-p ±0.5 V p-p, 75 ohms, unbalanced, sync negative
Video output	Phono jack.......1 1V p-p ±0.5 V p-p, 75 ohms, unbalanced, sync negative
Audio input	Minijack.......1 −10 dBs, (0.44 V rms) (0 dBs = 0.775 Vrms) 47 kilohms
Audio output	Minijack.......1 −5 dBs (0.4 V rms, at 400 Hz, 100 kilohms load) Less than 600 ohms
Camera connector	14-pin K-type connector Video in: 1 V p-p ±0.5 V p-p 75 ohms unbalanced, sync negative Video out: 1 V p-p ±0.5 V p-p 75 ohms unbalanced, sync negative Audio in: −20 dBs Audio out: −5 dBs (at load impedance 100 kilohms) less than 10 kilohms Power supply output: 12 V dc
Mircophone input	Minijack.......1 −60 dBs, for low-impedance microphone

— Continued on next page —

Beta β

VIDEO CASSETTE RECORDER

SONY®

MICROFILM

Consumer VIDEO

Timer section

Clock	Quartz-lock system
Control time	24-hour cycle
Timer setting	Only to start and stop recording 4 programs can be set over 14 days.
Power back up	Self-charging battery incorporated Back-up duration: up to 10 minutes at one time (after the battery has been charged at least 40 hours.)

General

Power requirements	120 V ac ±10%, 60 Hz ±0.5%
Power consumption	30 W (VTR) 56 W (Max. with accessories)
AC outlet	Unswitched max. 400 W
Operating temperature	5°C to 40°C (41°F to 104°F)
Storage temperature	−20°C to +65°C (−4°F to +149°F)
Dimensions	Approx. 430 × 80 × 365 mm (w/h/d) (17 × 3 1/4 × 14 3/8 inches) incl. projecting parts and controls
Weight	Approx. 9.4 kg (20 lb 12 oz) net

Accessories supplied

Betamax video cassette tape	1
External antenna connector	
EAC-24 (75-ohm to 300-ohm matching transformer)	1
EAC-25 (300-ohm to 75-ohm matching transformer)	1
75-ohm coaxial cable with F-type connectors (2 m, 6 feet)	1
300-ohm twin lead (2 m, 6 feet)	1
Remote control unit RMT-312 with two size AA batteries	1
Channel number segments	1 set

Design and specifications subject to change without notice.

SAFETY-RELATED COMPONENT WARNING!!

COMPONENTS IDENTIFIED BY SHADING AND MARK ⚠ ON THE SCHEMATIC DIAGRAMS, EXPLODED VIEWS AND IN THE PARTS LIST ARE CRITICAL TO SAFE OPERATION. REPLACE THESE COMPONENTS WITH SONY PARTS WHOSE PART NUMBERS APPEAR AS SHOWN IN THIS MANUAL OR IN SUPPLEMENTS PUBLISHED BY SONY. CIRCUIT ADJUSTMENTS THAT ARE CRITICAL TO SAFE OPERATION ARE IDENTIFIED IN THIS MANUAL. FOLLOW THESE PROCEDURES WHENEVER CRITICAL COMPONENTS ARE REPLACED OR IMPROPER OPERATION IS SUSPECTED.

ATTENTION AU COMPOSANT AYANT RAPPORT À LA SÉCURITÉ!!

LES COMPOSANTS IDENTIFIÉS PAR UN TRAMÉ ET UNE MARQUE ⚠ SUR LES DIAGRAMMES SCHÉMATIQUES, LES VUES EXPLOSÉES ET LA LISTE DES PIÈCES SONT CRITIQUES POUR LA SÉCURITÉ DE FONCTIONNEMENT. NE REMPLACER CES COMPOSANTS QUE PAR DES PIÈCES SONY DONT LES NUMÉROS SONT DONNÉS DANS CE MANUEL OU DES SUPPLÉMENTS PUBLIÉS PAR SONY. LES RÉGLAGES DU CIRCUIT QUI SONT CRITIQUES POUR LA SÉCURITÉ DE FONCTIONNEMENT SONT IDENTIFIÉS DANS CE MANUEL. SUIVRE LES PROCÉDURES QUAND LES COMPOSANTS CRITIQUES SONT REMPLACÉS OU LE FONCTIONNEMENT IMPROPRE EST SUSPECTÉ.

TABLE OF CONTENTS

1. GENERAL

Location and Function of Controls 4
Camera Recording 9
Basic Operation 11
Playback 13
Timer-Activated Recording 15
Advanced Operation 19
Tape Copy/PCM Recording and Playback 21
Dubbing Audio 22

2. DISASSEMBLY

2-1. Cabinet Removal 23
2-2. Opening RR-1A Board 24
2-3. Removal of VL-3 Board 24
2-4. Opening TU-21, SS-10A Board 24
2-5. Opening TU-21, SS-10A, VA-3 and MI-2 Board (Check) 25
2-6. Tuner Removal 25

3. BLOCK DIAGRAM

Overall Block Diagram 27
System Control Block Diagram 30
System Control Block Diagram (1) 32
System Control Block Diagram (2) 33
System Control Circuit and Servo Circuit Interface 35
System Control Circuit and Audio Circuit Interface 35
System Control Circuit and Video Action Circuit Interface 37
System Control Circuit and Timer Circuit Interface 37
System Control Circuit and Tuner Circuit Interface 39
System Control Circuit and Mechanism Block Interface 39
System Control Circuit and Mechanism Interface 41
System Control Circuit and Tuner Circuit Interface 43
Capstan Phase System Timing Chart (REC) 45
Capstan Phase System Timing Chart (PB) 45
Capstan Speed System Timing Chart 46
Drum Phase System Timing Chart 46
Instrumentation Counter Timing Chart 47
Drum Speed System Timing Chart 47
FG Circuit Timing Chart 48
PG-A, PG-B, PG-S Timing Chart 49
PG-A, PG-S Timing Chart (REC/PB) 49
CTL Circuit of IC409 Timing Chart 50
Swing Search Servo Timing Chart (1) 51
Swing Search Servo Timing Chart (2) 52
Swing Search Servo Block Diagram 53
Swing Search Servo Timing Chart (3) 53
Servo Block Diagram (DRUM/CAPSTAN) 54
Reel Servo Block Diagram 56
8FG Signal Generator Timing Chart (1) 57
8FG Signal Generator Timing Chart (2) 57
Audio Block Diagram 58
Audio Level Diagram – REC/PB Mode – 59
Video Block Diagram 60
Video Y Block Diagram 62
Video Chroma Block Diagram 63
Timer Block Diagram 64
Power Supply Block Diagram 66

4. PRINTED WIRING BOARD AND SCHEMATIC DIAGRAM

Frame Schematic Diagram 70
VA-3 (Y & Chroma Signals Record/Playback Process) Printed Wiring Board 73
VA-3 (Y & Chroma Signals Record/Playback Process) Board Schematic Diagram 77
VA-3 (Audio Record/Playback Process) and (MIC Jack) Printed Wiring Board 81
VA-3 (Audio Record/Playback Process) and (MIC Jack) Board Schematic Diagram 85
Semiconductor 87
Tuner (BT-846) 88
SS-10A (System Control) and MB-3 (Switch) Printed Wiring Board 89
SS-10A (System Control) and MB-3 (Switch) Board Schematic Diagram 93
SS-10A (Capstan & Drum Servo Index/Reel Servo) Printed Wiring Board 97
Capstan Motor Board Schematic Diagram 100
Reel Motor Board Schematic Diagram 100
SS-10A (Capstan & Drum Servo Index/Reel Servo) Board Schematic Diagram 101
VL-3 (Slow Servo) Printed Wiring Board 105
VL-3 (Slow Servo) Board Schematic Diagram 109
SW-12 (Switch Tracking Control) Printed Wiring Board/Schematic Diagram 112
FU-3 (Function Switch Indicator) Printed Wiring Boards 113
FU-3 (Function Switch Indicator) Board Schematic Diagram 115
RR-1A (Remote Control (Receiver) Tape Solenoid & Motor Drive Remaining Indicator) Printed Wiring Board 117
RR-1A (Remote Control (Receiver) Tape Solenoid & Motor Drive Remaining Indicator) Board Schematic Diagram 119
RL-7 (Relay) and LM-8 (Noise Filter) Printed Wiring Board/Schematic Diagram 122
LM-9 (Noise Filter Relay), RL-4 (Relay), CI-2, CI-3 (Switch) Printed Wiring Board 123
LM-9 (Noise Filter Relay), RL-4 (Relay), CI-2, CI-3 (Switch) Board Schematic Diagram 124
N (Infrared Receiver) Printed Wiring Board 125
N (Infrared Receiver) Board Schematic Diagram 126
TU-21 (Tuner), TU-22 (Relay) Printed Wiring Board 127
TU-21 (Tuner), TU-22 (Relay) Board Schematic Diagram 129
CH-21 (Tuning Switch) Printed Wiring Board/Schematic Diagram 131
CH-22 (Channel Selector) Printed Wiring Board/Schematic Diagram 132
TM-34 (Program Timer/Tape Counter) Printed Wiring Board 133
TM-34 (Program Timer/Tape Counter) Board Schematic Diagram 135
SR-11A (Power Supply) Printed Wiring Board 137
SR-11A (Power Supply) Board Schematic Diagram 139

5. EXPLODED VIEWS

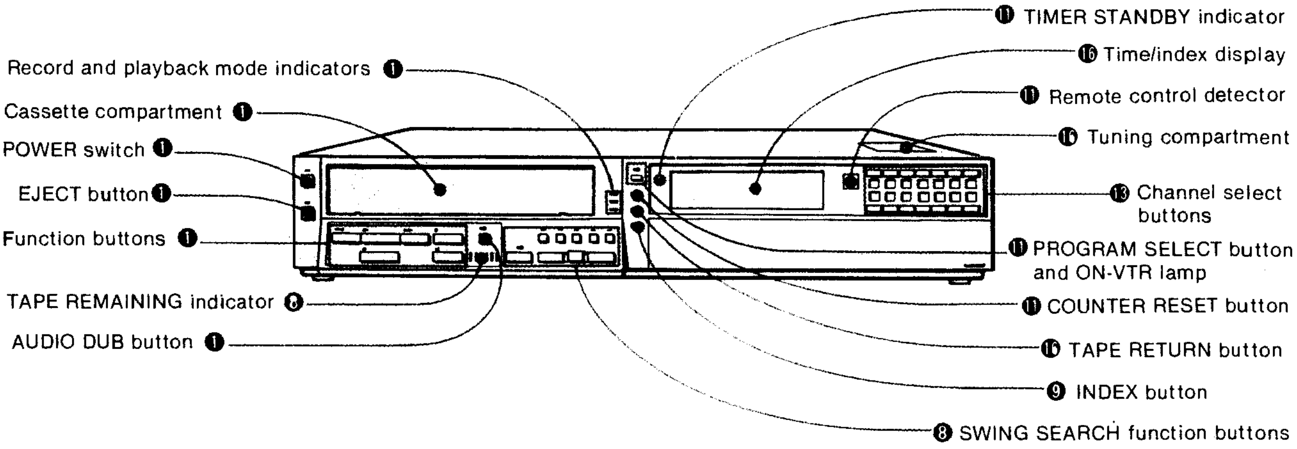
Cabinet Assembly 141
Front Assembly 142
Power Assembly 143
Main Board Assembly 144
Front Board Assembly 145
Cassette Loading Assembly (1) 146
Cassette Loading Assembly (2) 147
Chassis Assembly (1) 148
Chassis Assembly (2) 149
Chassis Assembly (3) 150
Chassis Assembly (4) 151
Drum Assembly 152
Chassis Assembly (5) 153
Chassis Assembly (6) 154
Chassis Assembly (7) 155
Chassis Assembly (8) 156

6. ELECTRICAL PART LIST 157

SECTION 1

OUTLINE

LOCATION AND FUNCTION OF CONTROLS


❶ Record and playback mode indicators
❷ Cassette compartment
❸ POWER switch
❹ EJECT button
❺ Function buttons
❻ TAPE REMAINING indicator
❼ AUDIO DUB button
⓱ TIMER STANDBY indicator
⓰ Time/index display
⓯ Remote control detector
⓮ Tuning compartment
⓭ Channel select buttons
⓬ PROGRAM SELECT button and ON-VTR lamp
⓫ COUNTER RESET button
❿ TAPE RETURN button
❾ INDEX button
❽ SWING SEARCH function buttons

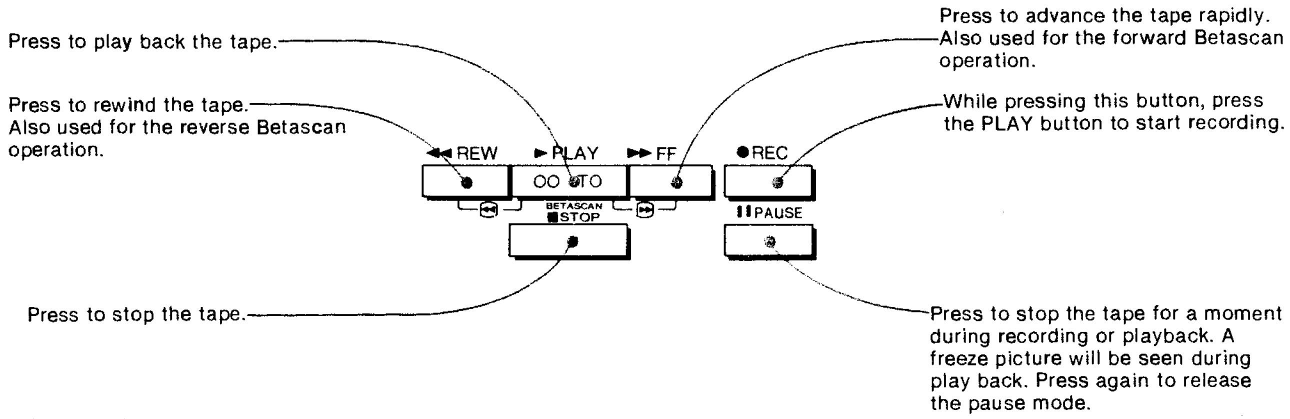
❶ Record and playback mode indicators
The lamp corresponding to the engaged record or playback mode lights up.

❷ Cassette compartment
Insert a cassette to be recorded or played back after turning on the recorder.

❸ POWER switch
Press to turn the power on. The lamp lights up.
To turn the unit off, press the switch again.
The timer section will continue to operate and the time will be displayed even if the POWER switch is off as long as the ac power cord is plugged into a working outlet.

❹ EJECT button
Press to remove a cassette.
This button does not function when the recorder is turned off.

❺ Function buttons


Press to play back the tape.
Press to rewind the tape. Also used for the reverse Betascan operation.
◀◀ REW
► PLAY
►► FF
● REC
BETASCAN
■ STOP
II PAUSE
Press to advance the tape rapidly. Also used for the forward Betascan operation.
While pressing this button, press the PLAY button to start recording.
Press to stop the tape.
Press to stop the tape for a moment during recording or playback. A freeze picture will be seen during play back. Press again to release the pause mode.

❻ TAPE REMAINING indicator
Shows the amount of tape remaining.

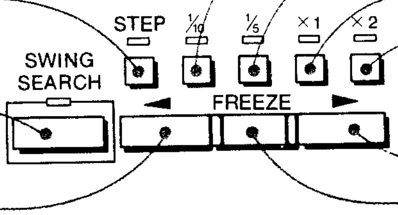
❼ AUDIO DUB button
Use this button to dub audio onto a previously recorded tape.

⑨ SWING SEARCH function buttons

Press to obtain a frame-by-frame picture.

Press this button during playback to activate the SWING SEARCH function. The lamp will light up. After pressing this button, select the playback speed and the tape direction.

Press for playback in the reverse direction.



Press to obtain a slow-motion (1/10 speed) picture.

Press to obtain a slow-motion (1/5 speed) picture.

Press to obtain a normal speed picture.

Press to obtain a double-speed picture.

Press for playback in the forward direction.

Press to obtain a freeze picture.

⑨ INDEX button
Press to activate the index function and set the number of the recorded program you want to view.
The selected number will be dispaled on the time/index display.

⑩ TAPE RETURN button
Press this button in the stop mode to return the tape to the "0H00M00s" point on the time counter.

⑬ COUNTER RESET button
Press to set the time counter reading to "0H00M00s".

⑬ PROGRAM SELECT button and ON-VTR lamp
To view a TV program selected by a channel select button on the recorder or to monitor the picture being recorded, press this button so that the ON-VTR lamp lights up. When the ▶ PLAY button on the recorder is pressed, the unit is automatically set in this mode. To view a TV program in the usual manner, press this switch so that the lamp goes off. When the recorder is turned off, the recorder is automatically set in this mode.

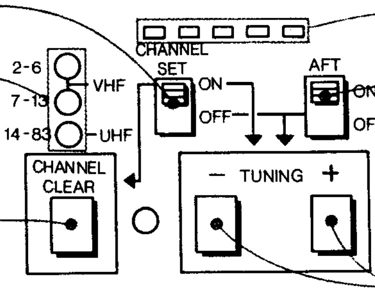
⑬ Channel select buttons
Press the button of the channel to be recorded or to be viewed. The selected channel number will light.

⑬ Tuning compartment
All the switches and buttons for channel presetting are in this compartment.

Set to ON to preset a channel.
Normally set this switch to OFF (the switch will be automatically set to OFF when the compartment lid is closed).

Band indicating lamps: One of these lamps lights to show the tuning band of the tuned channel.

To clear the preset channel, press this button while the CHANNEL SET switch set to ON.



Tuning indicator: Indicates the approximate position of the tuned channel within the tuning band scanned.

Set to OFF to fine tune a station manually. Normally set this switch to ON.

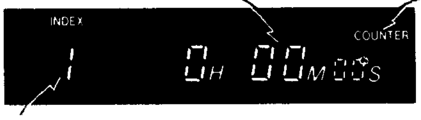
Press to tune in a station.

⑬ Remote control detector
Point the infrared transmitter of the supplied remote control unit here.

⑬ Time/index display
This indicates the present time when the CLOCK/COUNTER selector is set to CLOCK or when the recorder is turned off, and the tape running time at the normal playback speed when the CLOCK/COUNTER selector is set to COUNTER. Timer programs and the selected index number will also be shown.

When the CLOCK/COUNTER selector is set to COUNTER

Indicates how much the tape has advanced at normal speed.



Indicates that the display functions as a time counter.

This display appears only when the recorder is turned on.

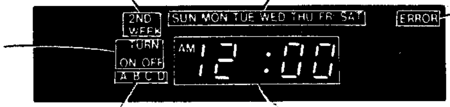
Shows the index number selected with the INDEX button.

When the CLOCK/COUNTER selector is set to CLOCK

Lights when you are setting a day of the second week.

Shows a day of the week.

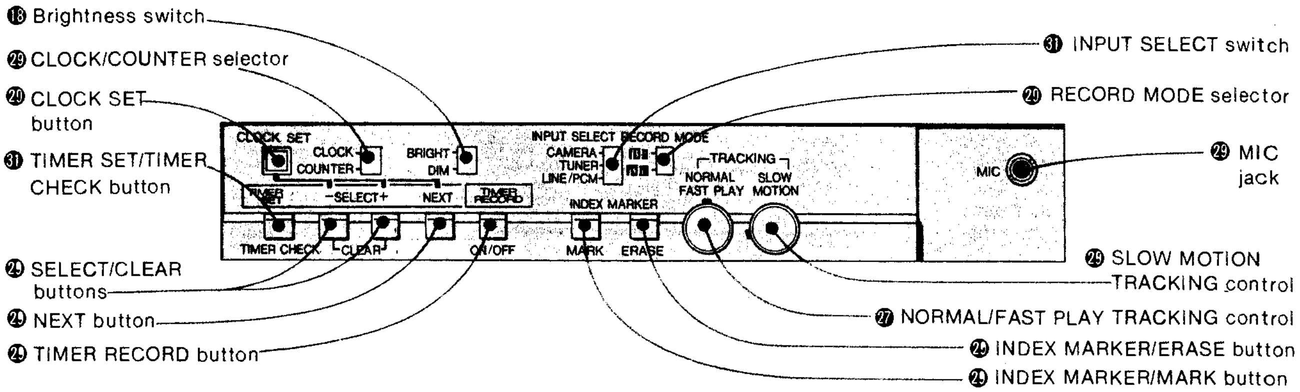
Lights when you are setting a turn-on time or a turn-off time.



Blinks when the settings for two or more programs overlap or when a timer recording cannot be made.

Shows a timer program.

Shows the present time or the turn-on or turn-off time.


⑱ Brightness switch
⑲ CLOCK/COUNTER selector
⑳ CLOCK SET button
㉑ TIMER SET/TIMER CHECK button
㉒ SELECT/CLEAR buttons
㉓ NEXT button
㉔ TIMER RECORD button
CLOCK SET
CLOCK
COUNTER
BRIGHT
DIM
TIMER SET
-SELECT+
NEXT
TIMER RECORD
TIMER CHECK
CLEAR
ON/OFF
INPUT SELECT
CAMERA
TUNER
LINE/PCM
RECORD MODE
βII
βIII
TRACKING
NORMAL FAST PLAY
SLOW MOTION
INDEX MARKER
MARK
ERASE
MIC
㉛ INPUT SELECT switch
㉚ RECORD MODE selector
㉙ MIC jack
㉘ SLOW MOTION TRACKING control
㉗ NORMAL/FAST PLAY TRACKING control
㉖ INDEX MARKER/ERASE button
㉕ INDEX MARKER/MARK button

⑰ TIMER STANDBY indicator
This lamp lights up when the TIMER RECORD button is pressed after the timer program has been set.

⑱ Brightness switch
Select the brightness of the time/index display, BRIGHT or DIMMER, with this switch.

⑲ CLOCK/COUNTER selector
Select the display of the time display, either clock or time counter.

⑳ CLOCK SET button
Press to set the clock.

㉑ TIMER SET/TIMER CHECK button
Press to set the timer for recording.
To check the contents of a timer program, press this button.

㉒ SELECT/CLEAR buttons
Used to set the clock time, day of the week and timer programs. To erase the contents of a timer program, press these buttons simultaneously.

㉓ NEXT button
Used for memorizing the clock time, day of the week and timer programs set by the SELECT buttons.

㉔ TIMER RECORD button
Press to activate the timer recording stand-by mode. The TIMER STANDBY lamp will light up.

㉕ INDEX MARKER/MARK button
Press to record an index signal at the desired point on the tape.

㉖ INDEX MARKER/ERASE button
Press to erase the index signal recorded on the tape.

㉗ NORMAL/FAST PLAY TRACKING control
Turn to eliminate the streaks or snow in a double speed or a reverse playback picture, or for playback of a cassette recorded by another video cassette recorder.
- Return the control to the dotted position after viewing the particular cassette.

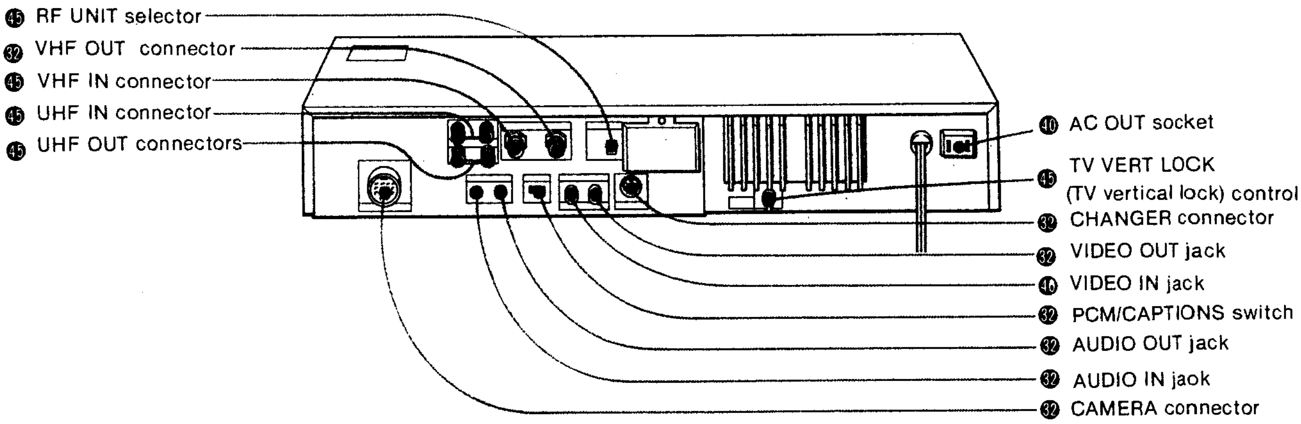
㉘ SLOW MOTION TRACKING control
Turn to eliminate the streaks or snow for a freeze, a frame-by-frame or slow motion playback.
- Return the control to the dotted position after playback.

㉙ MIC jack (mini type)
Connect a microphone here. If your microphone has a phone-type plug, use a plug adaptor, such as the Sony PC-1A.

㉚ RECORD MODE selector
This selects recording tape speed, βII or βIII, so that you can take full advantage of the various cassettes available. The recording time of any given cassette in the βIII mode is 1.5 times that in the βII mode.
- Do not change the position of the selector during recording, or the playback picture and sound will be distorted at that point.
- The playback speed is automatically selected regardless of this selector setting.

㉛ INPUT SELECT switch
Select the program to be recorded.
LINE/PCM: for recording signals connected to the VIDEO IN and AUDIO IN Jacks.
TUNER: for recording TV programs.
CAMERA: for recording camera signals connected to the CAMERA connector.

Rear panel


㊺ RF UNIT selector
㉜ VHF OUT connector
㊺ VHF IN connector
㊺ UHF IN connector
㊺ UHF OUT connectors
㊵ AC OUT socket
㊺ TV VERT LOCK (TV vertical lock) control
㉜ CHANGER connector
㉜ VIDEO OUT jack
㊵ VIDEO IN jack
㉜ PCM/CAPTIONS switch
㉜ AUDIO OUT jack
㉜ AUDIO IN jaok
㉜ CAMERA connector

㉜ **CAMERA connector** (14-pin K-type)
Connect a video camera, such as a HVC-2200, etc.

㉜ **AUDIO IN jack (mini type)**
Connect to the line output of a sound source such as a cassette recorder or an audio amplifier, or to the audio output of a camera or another video cassette recorder.

㉜ **AUDIO OUT jack** (mini type)
Connect the audio input of another video cassette recorder, a video monitor, etc.

㉜ **PCM/CAPTIONS switch**
Normally set to the right position. For receiving captioned TV programs or for PCM recording and playback using a PCM adaptor, set this switch to the left position.

㊴ **VIDEO IN jack** (phono type)
Connect the video output of a camera, another video cassette recorder, etc.

㉜ **VIDEO OUT jack** (phono type)
Connect the video input of another video cassette recorder or of a video monitor.

㉜ **CHANGER connector**
Connect an AG-400 auto cassette changer which will be available in the near future.

㉜ **TV VERT LOCK (TV vertical lock) control**
If a jitter appears in the freeze, frame-by-frame or slow motion picture, first obtain a freeze picture and turn this control until the picture is stable.

㊵ **AC OUT socket**
This unswitched outlet supplies ac power to video or audio equipment whose power consumption is under 400 watts.

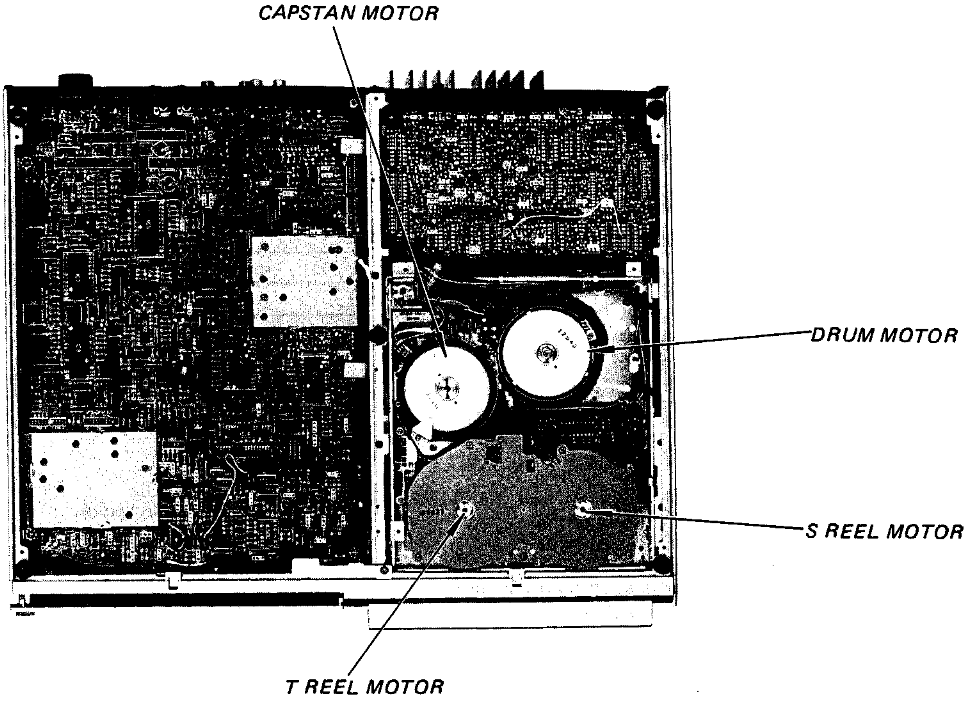
㊺ **RF UNIT selector**
Select the output channel at the VHF OUT connector. Set the switch to 3 CH or 4 CH, whichever is not active in your area.

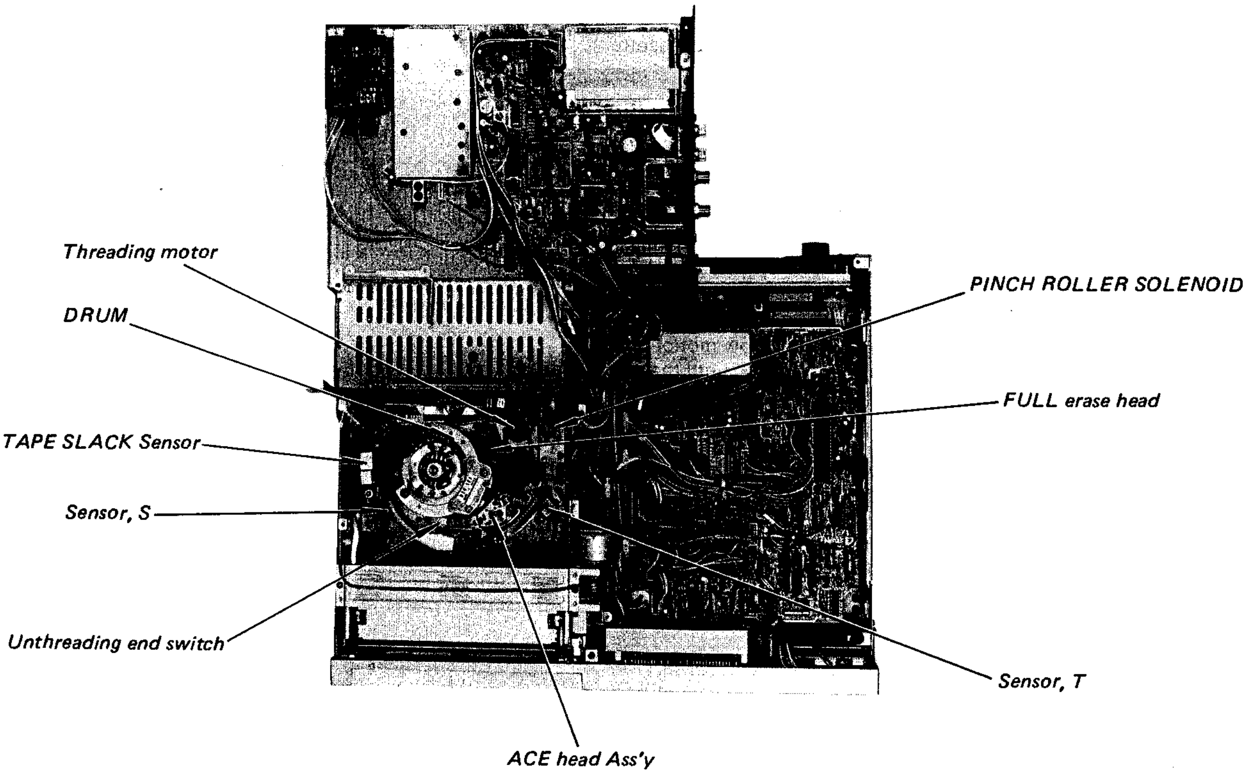
㉜ **VHF OUT connector**
Connect to the VHF antenna connector of the TV receiver. The signal of a VTR program (which is converted into a VHF signal) and the VHF TV signal will be supplied to the TV receiver.

㊺ **VHF IN connector**
Connect a VHF TV antenna here.

㊺ **UHF IN connectors**
Connect an UHF TV antenna here.

㊺ **UHF OUT connectors**
Connect to the UHF antenna terminals of the TV receiver to view UHF TV programs even when the recorder is turned off.


CAPSTAN MOTOR
DRUM MOTOR
S REEL MOTOR
T REEL MOTOR

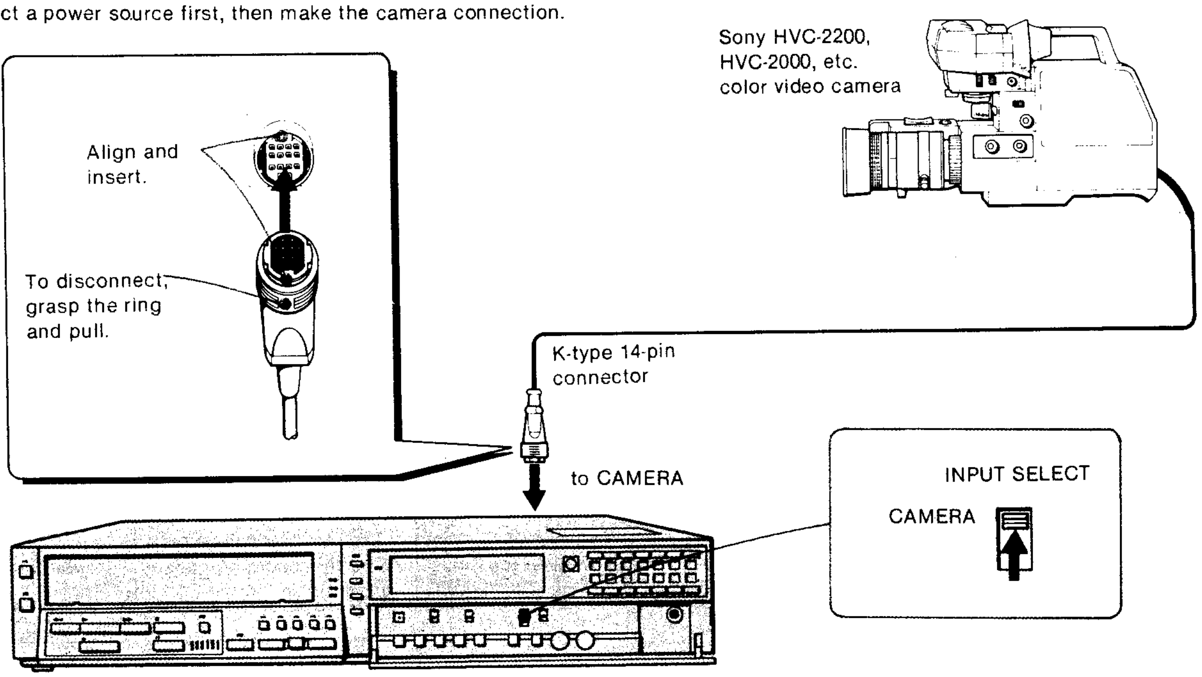

Threading motor
DRUM
TAPE SLACK Sensor
Sensor, S
Unthreading end switch
PINCH ROLLER SOLENOID
FULL erase head
Sensor, T
ACE head Ass'y

CAMERA RECORDING .....To produce your own programs

CONNECTIONS

- The camera must conform to American TV (EIA) standards.

Connect a power source first, then make the camera connection.


Sony HVC-2200,
HVC-2000, etc.
color video camera
Align and insert.
To disconnect, grasp the ring and pull.
K-type 14-pin connector
to CAMERA
INPUT SELECT
CAMERA

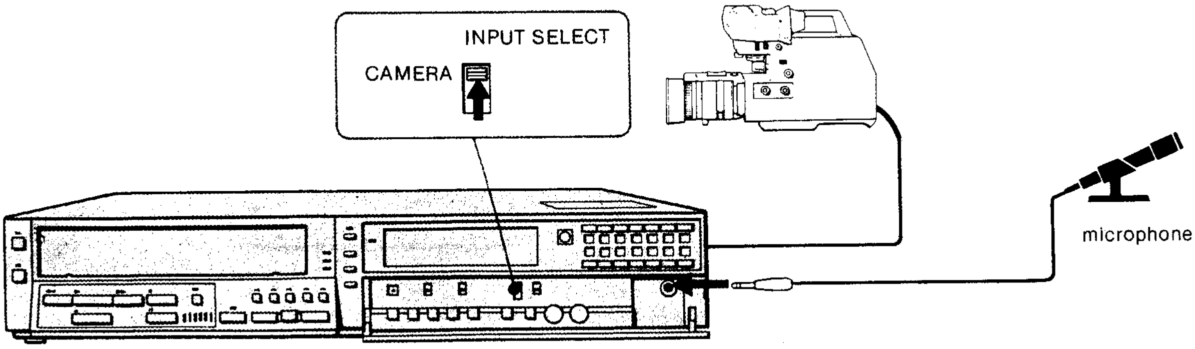
To connect a camera which is not equipped with a K-type 14-pin connector
Use an ac adaptor. Connect the video output of the ac adaptor to the VIDEO/PCM IN jack of the recorder and the audio input of the ac adaptor to the AUDIO IN jack or the MIC jack of the recorder depending on the audio output level of the ac adaptor.
Set the INPUT SELECT switch to LINE/PCM.

Note:
If you want to use a camera not recommended in this manual, make sure that the power requirement of the camera is DC 12V and power consumption is under 10W. Otherwise, the video cassette recorder will be damaged.

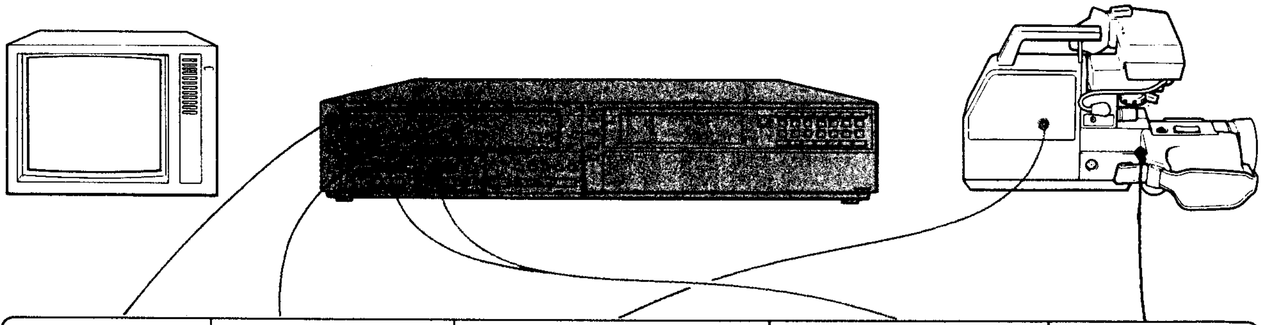
To record the sound from an external microphone
Plug a microphone into the MIC jack on the recorder. The microphone built into the camera will be disconnected automatically.

- If the microphone has a phone plug, use a plug adaptor such as the Sony PC-1A (optional).
- When a microphone is connected to the recorder, the sound from the camera is disconnected.

Do not move the INPUT SELECT switch during recording or playback when using a Sony HVC-2000 or HVC-2200 video camera. If you do, the recorder will be set into the pause mode. When the recorder stops, turn the power off and turn it on again.

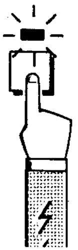

INPUT SELECT
CAMERA
microphone

OPERATING PROCEDURE



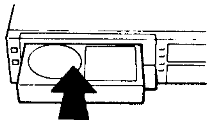
1

The lamp will light up.



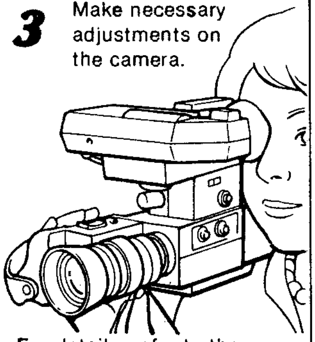
2

Insert a cassette.



3

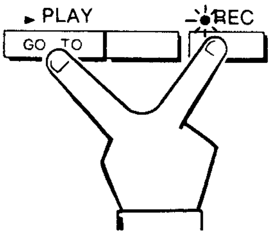
Make necessary adjustments on the camera.



For details, refer to the camera's instruction manual.

4

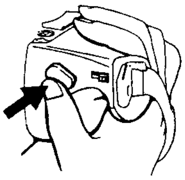
While holding ● REC pressed, press ▶ PLAY.



The recorder will be set into the recording pause mode.

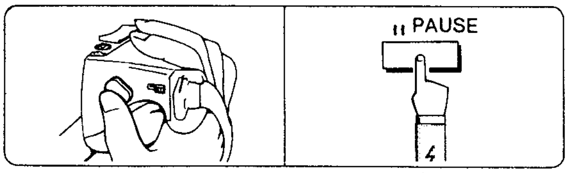
5

Press the tape run/stop button on the camera.



Recording will begin.

To momentarily stop the recording
Press the tape run/stop button on the camera or the PAUSE button on the recorder. To restart the recording, press the same button again.



Automatic release: to protect the video heads and the tape, the pause mode will be automatically released after about 8 minutes. The recorder will revert to the record mode.

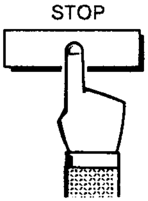
TO MONITOR THE PICTURE BEING RECORDED WITH A CAMERA

Turn on the TV, select the channel for the video recorder and press the PROGRAM SELECT button on the recorder to light up the associated lamp.

RECORDING REVIEW

When a camera having a recording review function, such as the HVC-2200*, is used
Press the recording review button in the recording pause mode. The last few seconds of recorded scene will be played back immediately so that you can check whether the recording has been made correctly.

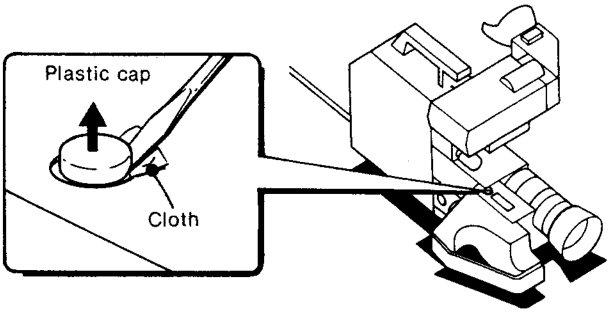
When the recording is finished.



If the tape reaches the end, the tape will be rewound to the beginning.

The recorder will then enter the recording pause mode at the point where the recording review button was pressed. To continue recording, press the tape run/stop button on the camera.

***For customers who have a HVC-2200 camera**
The small projection located near the zoom button is a recording review button. If this button is covered with a plastic cap, carefully peel off the cover over the button with a screwdriver or similar object.



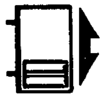
Caution:
Make sure that the plastic cap has not already been removed, and inadvertently attempt to pry up the button itself.

BASIC OPERATION

TV PROGRAM RECORDING

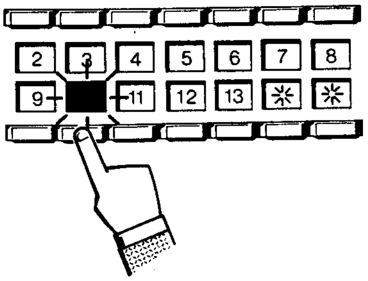
1 Turn on the TV and select the channel preset for the video recorder (channel 3 or 4).

ORD MODE

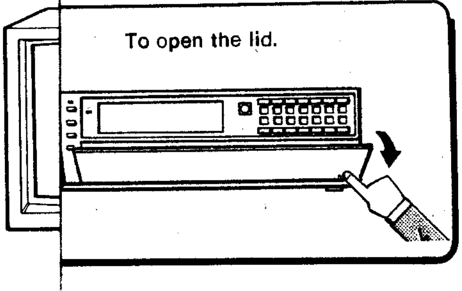


CORD MODE to
sired position.
elow.)

7 Select the channel to be recorded.



To open the lid.



In case you want to record a tape which is to be played back on another recorder from the very beginning of the tape, run the tape for about 15 seconds before starting recording. Otherwise you may miss the starting point during playback on the other machine.

t be

the
utes

The recording modes
Select the recording mode according to the length of to be recorded.

Mode	Cassette used			
	L-830	L-750	L-500	L-250
βII	3 hr. 20 min.	3 hr.	2 hr.	1 hr.
βIII	5 hr.	4 hr. 30 min.	3 hr.	1 hr. 30 min.

◀◀

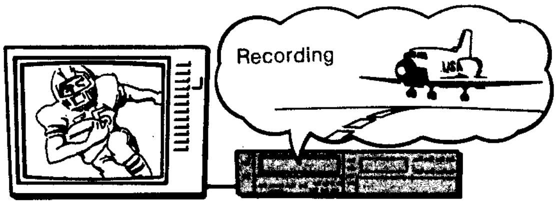
ack.

Recording cannot be done in the βI mode although t
ed in the βI mode can be played back with this reco

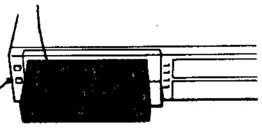
RECORDING ONE TV PROGRAM WHILE VIEWING ANOTHER

You can view one TV program while recording a different TV program which has been selected on the recorder.

❸ Start recording the desired TV program following the procedure above.
❸ Press the PROGRAM SELECT button so that the above lamp goes off.
❸ Select the channel you want to view on the TV.

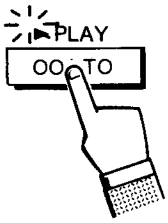


3 Insert a recorded cassette with the round window on the left.



To take out the cassette, press EJECT.

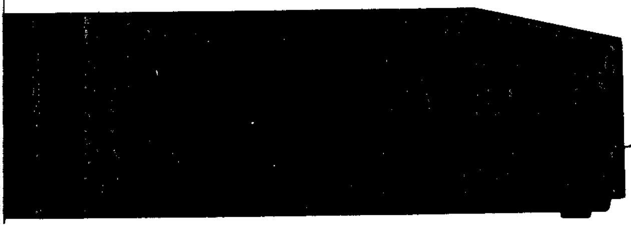
4 Press PLAY.



The lamp will light up.

Playback begins.

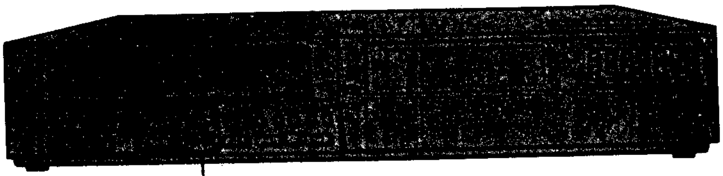
- The BI , BII and BIII modes will be selected automatically in playback depending on the mode in which the tape was recorded.



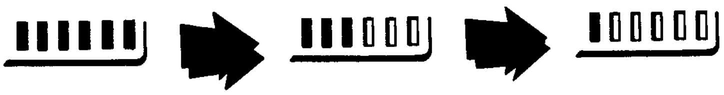
Video cassette recorder

TO CHECK THE AMOUNT OF TAPE LEFT ON THE REEL

The TAPE REMAINING indicator shows the amount of tape remaining while the tape is moving.



TAPE REMAINING indicator



At the beginning of the tape

When half of the tape remains.

When only the left-most segment begins to blink, the tape is nearly at its end.

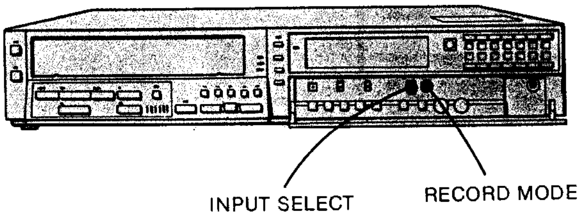
- For the first few seconds the indicator illuminations may fluctuate while the amount of tape is being determined.
- To know the amount of tape remaining during fast forward or rewind mode, play the tape back at normal speed until the illumination stabilizes, then rewind or advance the tape rapidly.
- The indicator only operates when tape on which a recording has been made is played back, rewound or advanced rapidly. It will not operate with a blank tape or with the unrecorded portion of a tape.

TIMER-ACTIVATED RECORDING

Using the built-in timer, recordings of up to any four programs occurring within the next fourteen days can be made automatically, even when you are not at home.

Check before setting the timer

- Is the clock set to the correct day and correct time? (For the clock setting, refer to the "SETTING THE CLOCK" of the accompanying set-up guide.)
- Is a cassette inserted in the recorder?
- Is the cassette long enough to record the programs? Check the setting of the RECORD MODE selector.
- Does the cassette have a safety tab on the bottom?
- Is the INPUT SELECT switch set to TUNER?



Examples of timer settings

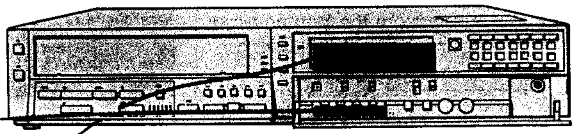
The turn-on day may be a particular day of the week or every day. You need not set the four programs all at one time.

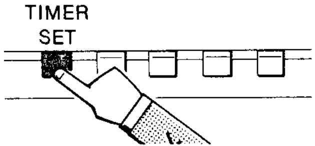
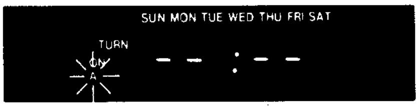
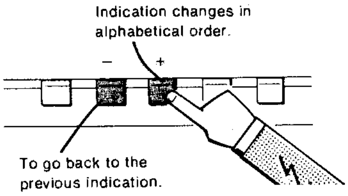
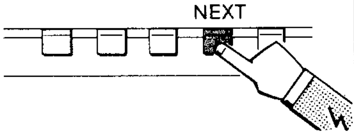
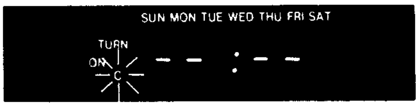
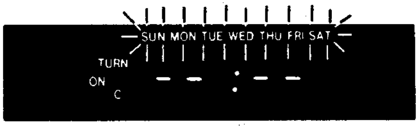
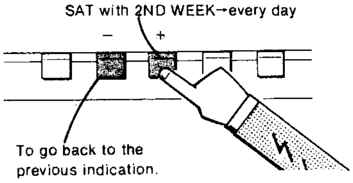
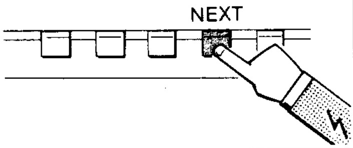
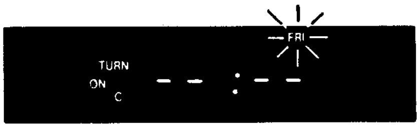
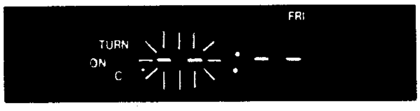
Program	day of the week	recording time	channel
A	Wednesday this week	8:00 p.m. – 9:00 p.m.	6
B	everyday	8:15 a.m. – 8:25 a.m.	2
C	Friday this week	9:00 p.m. – 11:25 p.m.	8
D	Tuesday next week	11:15 p.m. – 11:30 a.m.	10

Note: The timer cannot be set during recording.

SETTING THE TIMER

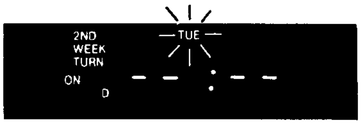
Example: Suppose you want to set the timer to Program C above.



	Button to be pressed	Time display The segment to be set will blink.
1	 TIMER SET	 SUN MON TUE WED THU FRI SAT TURN ON A -- : -- (The timer setting of Program A will be displayed if it has been set.)
2	Select the program.  Indication changes in alphabetical order. – + To go back to the previous indication.  NEXT	 SUN MON TUE WED THU FRI SAT TURN ON C -- : --  SUN MON TUE WED THU FRI SAT TURN ON C -- : --
3	Select the turn-on day. Indication changes as follows: every day→SUN→MON→... →SUN with 2ND WEEK→... SAT with 2ND WEEK→every day  – + To go back to the previous indication.  NEXT	 FRI TURN ON C -- : --  FRI TURN ON C -- : --

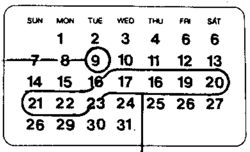
To record a program at the same time everyday
Press the NEXT button when all days of week indications are blinking.

If the day you want to record is more than 7 days ahead
Press the NEXT button when the desired day of week with the "2ND WEEK" indication is blinking.



The 2ND WEEK in this case is different from next week on the calendar. The 2ND WEEK is the week which begins exactly seven days from the present day, at the present time.

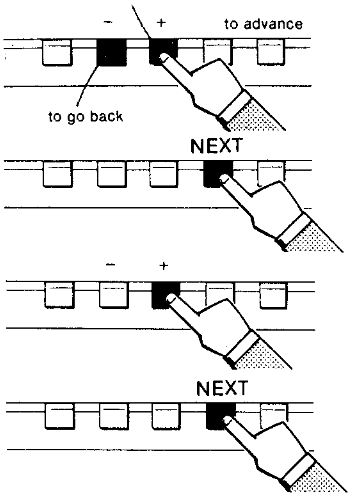
Suppose you are setting the timer on this day at 10:00 a.m.

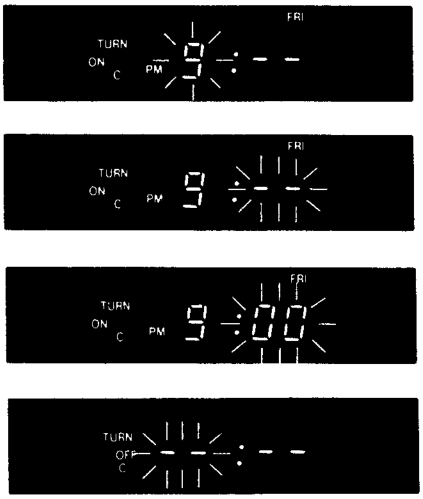


SUN	MON	TUE	WED	THU	FRI	SAT
	1	2	3	4	6	6
7	8	9	10	11	12	13
14	15	16	17	16	19	20
21	22	23	24	25	26	27
26	29	30	31.			

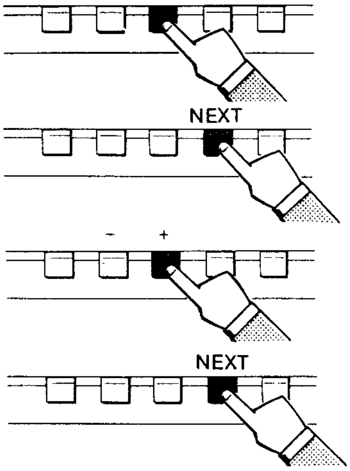
2ND WEEK:
from 10:01 a.m. on 16th to 10:00 a.m. on 23rd.

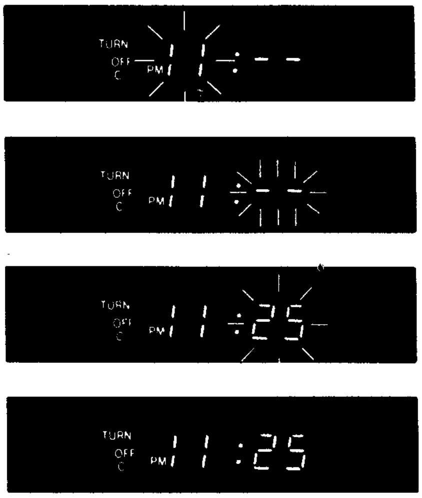
4 Set the turn-on time.


- +
to advance
to go back
NEXT
- +
NEXT

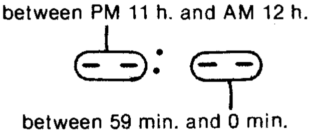

FRI
TURN ON C PM 9:- -
FRI
TURN ON C PM 9 :- -
FRI
TURN ON C PM 9 :00
TURN OFF C - -:- -

5 Set the turn-off time
(within 24 hours from the turn-on time).

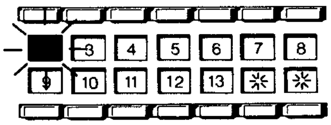



TURN OFF C PM 11:- -
TURN OFF C PM 11 :- -
TURN OFF C PM 11 :25
TURN OFF C PM 11 :25

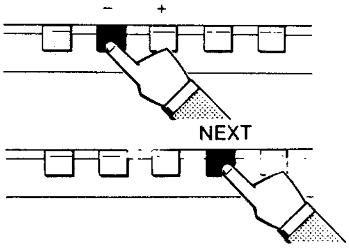
To record to the end of the tape
Set the turn-off time to a time after the tape will reach the end or to "--:--".

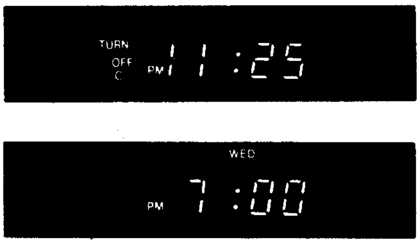

between PM 11 h. and AM 12 h.
between 59 min. and 0 min.

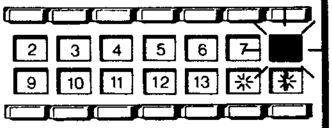
When the tape reaches the end during the timer recording, the recording stops and the unit will be turned off automatically after about 30 seconds. In this case the tape will not be rewound to the beginning.


3 4 5 6 7 8
9 10 11 12 13

6 Select the channel to be recorded.



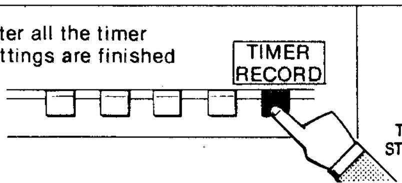

TURN OFF C PM 11 :25
WED
PM 7 :00


2 3 4 5 6 7
9 10 11 12 13

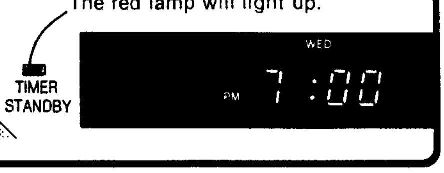
The present time is displayed and the unit is turned off.

Now Program C is set. To set Program A, B or D, repeat these steps. (The unit will be turned on when the TIMER SET button is depressed.)

7 After all the timer settings are finished


TIMER RECORD

The red lamp will light up.


TIMER STANDBY
WED
PM 7 :00

ONCE THE TIMER STANDBY LAMP HAS LIT UP, NO FUNCTION OF THE RECORDER CAN BE ACTIVATED, except for checking the timer setting.

At the preset turn-on time, recording will start automatically and will stop at the preset turn-off time.

TO OPERATE THE RECORDER AFTER THE TIMER HAS BEEN SET

Once the TIMER RECORD button has been pressed, the POWER switch on the recorder will not function.
This is to safeguard the timer recording.
To operate the recorder after the timer has been set, press the TIMER RECORD button again so that the TIMER STANDBY lamp goes off.
Also to stop the tape during timer recording, press the TIMER RECORD button so that the TIMER STANDBY lamp goes off.

- The timer settings are kept in the memory even if you disengage the TIMER RECORD button, so you can easily restore the setting later by pressing the TIMER RECORD button.

TO CHECK THE TIMER SETTING

Press the TIMER CHECK button. Each time you press the button, the indication will change as follows:

turn-on day and time of Program A → turn-off time →
turn-on day and time of Program B → turn-off time →
turn-on day and time of Program C → turn-off time →
turn-on day and time of Program D → turn-off time →
present time* (The unit will be turned off automatically).**

The indicator of the channel preset for the recording will light up at the same time the turn-on time of each progam is displayed, so that the channel can be checked. During timer recording, however, the channel for other timer programs cannot be checked.

Note: The timer setting cannot be checked during recordings other than a timer recording.

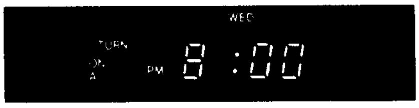
*To obtain a present time during the checking procedure, turn the unit off.
**During timer recording the unit will not be turned off even if you check the timer setting.

TO CLEAR THE TIMER SETTING

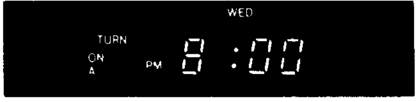
The memory of a timer program will be automatically erased when the recording of that program is finished. A setting for everyday will not be erased, of course.
If you want to skip the timer recording preset for everyday temporarily, press the TIMER RECORD button so that the TIMER STANDBY lamp goes off. To resume the timer standby mode of that program, press the button again.

If you want to erase the memory of a timer program, proceed as follows:

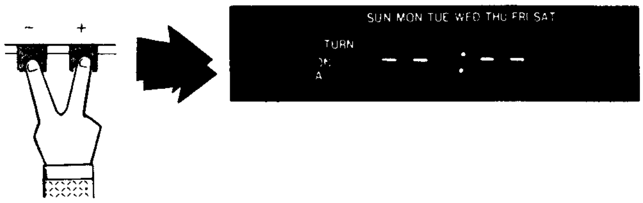
❸ Press the TIMER SET button as many times as required until the turn-on time or turn-off time of the program to be erased is displayed.



❸ Press the NEXT button.



❸ Press the + and − SELECT buttons simultaneously.
The entire memory of this program will be erased.

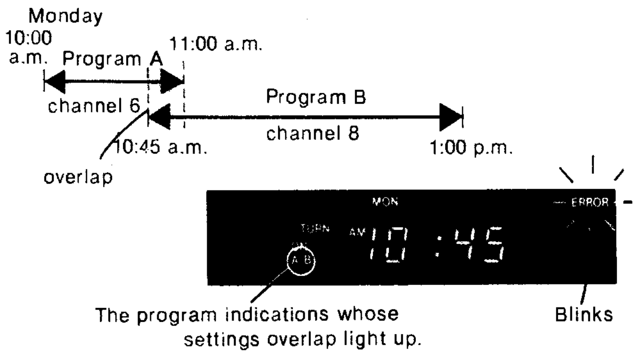

−
+
SUN MON TUE WED THU FRI SAT
TURN
ON
A
-- : --

To display a present time, turn the unit off.

IF THE "ERROR" INDICATOR BLINKS

If the "ERROR" indicator blinks while the timer is being set
It means that the settings for the programs overlap. Check the settings and eliminate the overlap.

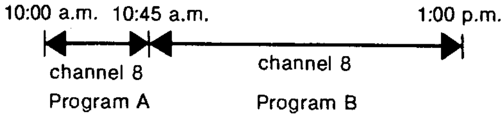
Setting



The program indications whose settings overlap light up.

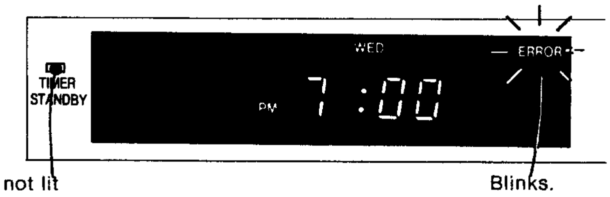
Blinks

Realized recording



If the TIMER STANDBY lamp lights up, recording can be made even with the "ERROR" indicator blinking, but the program being recorded will change to the next one when the next turn-on time will come.

If the "ERROR" indicator blinks and the TIMER STANDBY lamp does not light when the TIMER RECORD button is pressed



Check the following points:

- Did you insert a cassette into the recorder?
- Does the cassette inserted have a safety tab on the bottom?
- Make sure that the tape is not at its end.

After correcting the above points, press the NEXT button, then the TIMER RECORD button again.
Timer-activated recording cannot be activated if the TIMER STANDBY lamp does not light.

Notes on the "ERROR" indicator
The "ERROR" indicator does not light in the following cases, even if settings overlap.

— when the turn-off time of the program whose turn-on time is set earlier than the other one is set to "--:--".
Example:
Program A: Sun. 7:00 p.m. → "--:--" (to tape end)
Program B: Sun. 8:00 p.m. → 9:00 p.m.

— when one of the overlapping programs is set for next week and brackets the present time.
Examples:

Present time:	Sun. 3:00 p.m.
Program A:	Sun. 2:00 p.m. → 4:00 p.m. (The program actually starts next Sunday.
Program B:	Sun. of the 2nd week 3:30 p.m. → 5:00 p.m.

The ERROR indicator will light up and blink even if one timer program including the present time and another timer program do not actually overlap.
Examples:

Present time:	Sun. 3:00 p.m.
Program A:	Sun. 2:00 p.m. → 4:00 p.m. (The program will actually start next Sunday.)
Program B:	Sun. 3:30 p.m. → 5:00 p.m. (The program will start that day.)

We recommend that you check the preset timer programs whenever you set a new timer program.

WHEN A POWER INTERRUPTION OCCURS

If the clock shows "SUN AM 12:00" and does not advance
all the timer settings have been erased. Reset the clock time and the timer settings.

If the clock still shows the correct time
the power has been interrupted for less than 10 minutes and the clock has been powered by the built-in self-charging battery so that the timer programs were kept in the memory. If the interruption occurs after the recording has begun, recording will be resumed when the power is restored.

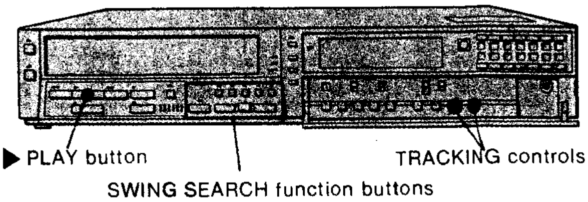
- The built-in battery will be charged automatically when the ac power cord of the recorder is plugged into a wall outlet for at least 40 hours.

ADVANCED OPERATION
TO OBTAIN VARIABLE SPEED PLAYBACK PICTURES —"SWING SEARCH."—

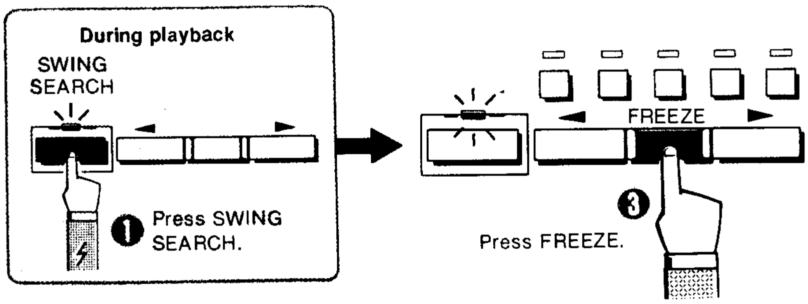
With this video cassette recorder, you can obtain a freeze, a slow motion, a double speed, a frame-by-frame or a reverse playback picture as well as a normal speed playback picture.

For example ....
To closely inspect a particular frame → FREEEZE PICTURE
To study your golf or tennis form → FRAME-BY-FRAME PICTURE
To watch a football play slowly unfold → SLOW-MOTION PICTURE
To quickly review a program → DOUBLE-SPEED PICTURE

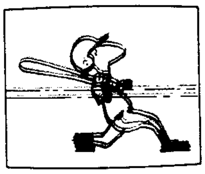
Notes
- The audio cannot be monitored in the "Swing Search" mode.
- Tapes recorded in the BI mode cannot be played back in the "Swing Search" mode.
- **To resume normal playback when the unit is in the "Swing Search" mode, press the ▶ PLAY button.**


▶ PLAY button
TRACKING controls
SWING SEARCH function buttons

FREEZE PICTURE

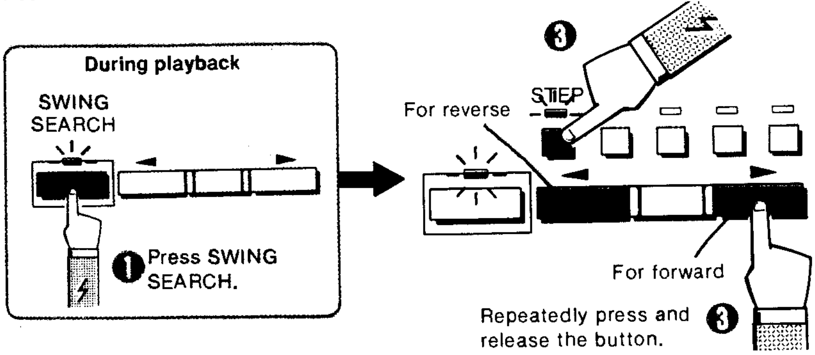

During playback
SWING SEARCH
❶ Press SWING SEARCH.
FREEZE
❸
Press FREEZE.

If a vertical jitter appears in the freeze, frame-by-frame or slow motion picture.



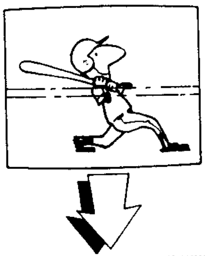
Obtain a freeze picture and adjust the TV VERT LOCK control at the rear of the recorder for the best possible picture. Then return the recorder to the previous mode.
- Once you adjust this control, you do not have to adjust it again unless you change the connected TV receiver.

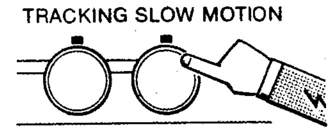
FRAME-BY-FRAME PLAYBACK


During playback
SWING SEARCH
❶ Press SWING SEARCH.
❸
For reverse
STEP
For forward
Repeatedly press and release the button.
❸

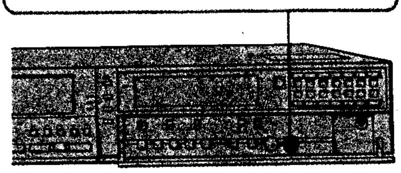
- Keep the button depressed for continuous frame-by-frame playback.

To remove the noise band in the freeze, frame-hy-frame or slow motion picture.



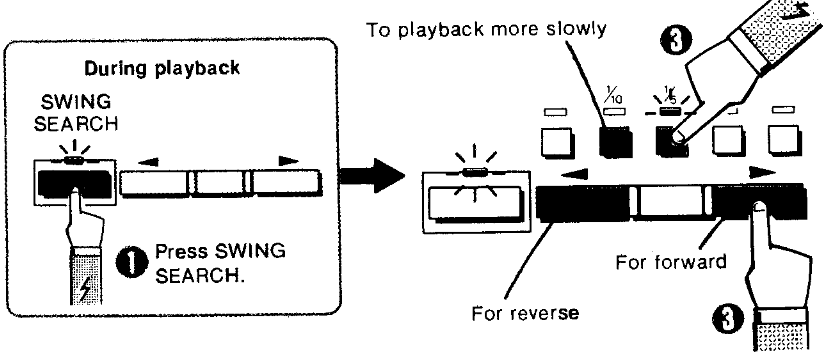

TRACKING SLOW MOTION

Obtain a slow motion pioture and adjust the control.
Return the recorder to the previous mode or continue in slow motion.

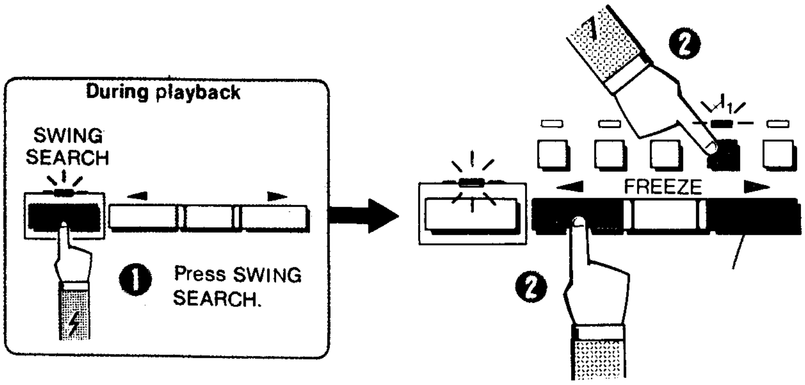


- Return the control to its original (dotted) position after the playback.

SLOW MOTION

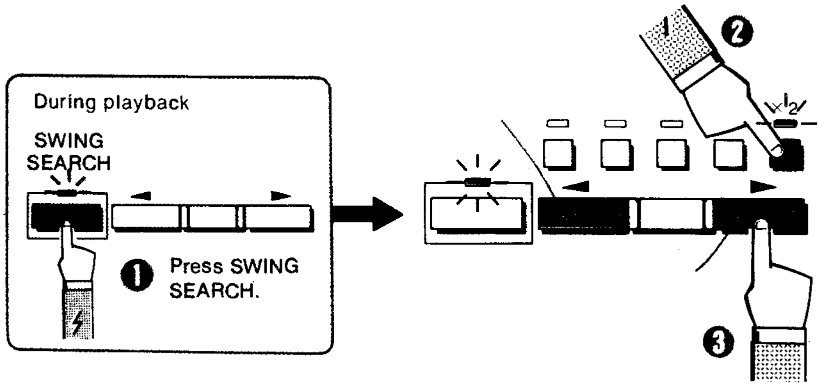

During playback
SWING SEARCH
❶ Press SWING SEARCH.
To playback more slowly
❸
1/10
1/5
For forward
For reverse
❸

REVERSE PLAYBACK


During playback
SWING
SEARCH
◄
►
FREEZE
×1
❷
❷

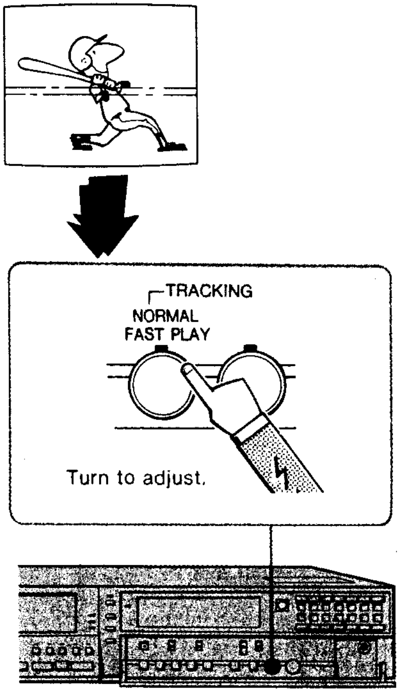
❶ Press SWING SEARCH.

DOUBLE SPEED PICTURE


During playback
SWING
SEARCH
◄
►
×2
❷
❸

❶ Press SWING SEARCH.

To remove the noise band in the reverse normal speed or the forward double speed picture

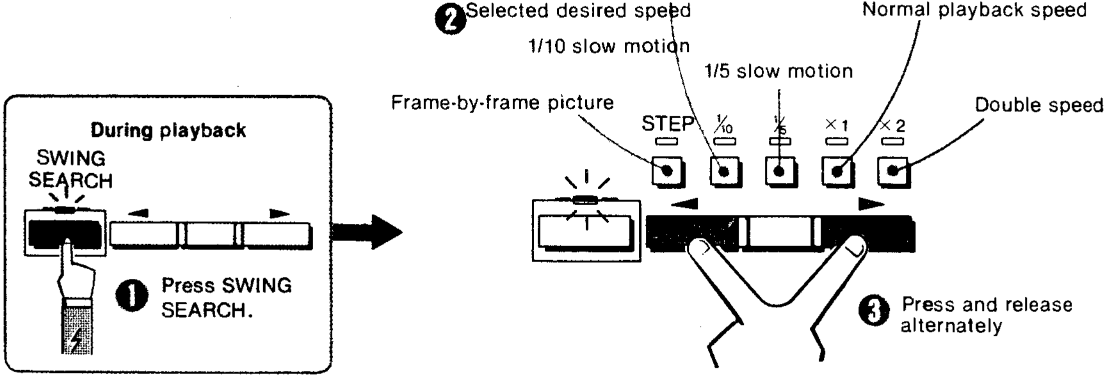

TRACKING
NORMAL
FAST PLAY

Turn to adjust.

- The noise band in the reverse double speed picture cannot be removed.

Return the control to its original (dotted) position after the reverse normal speed or the forward double speed viewing.

BACK AND FORTH PLAYBACK


During playback
SWING
SEARCH
◄
►
❷ Selected desired speed
1/10 slow motion
1/5 slow motion
Normal playback speed
Frame-by-frame picture
Double speed
STEP
1/10
1/5
×1
×2

❶ Press SWING SEARCH.

❸ Press and release alternately

TAPE COPY

To duplicate a tape, you will need two video recorders; one is to play back the original tape and the other is to record.

❶ Connect the recorders as illustrated.

❷ Turn on both recorders.

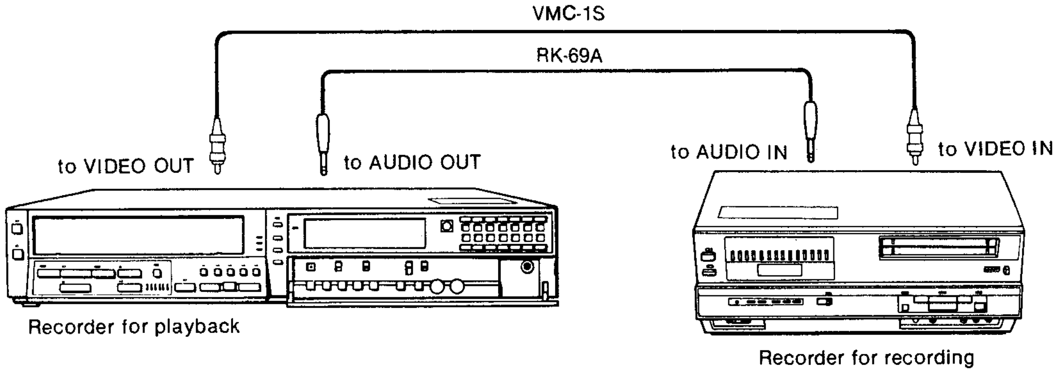
❸ Insert the original cassette into the recorder for playback.

❹ Insert a blank cassette into the recorder for recording.

❺ Set the INPUT SELECT switch of the recorder for recording to LINE/PCM.

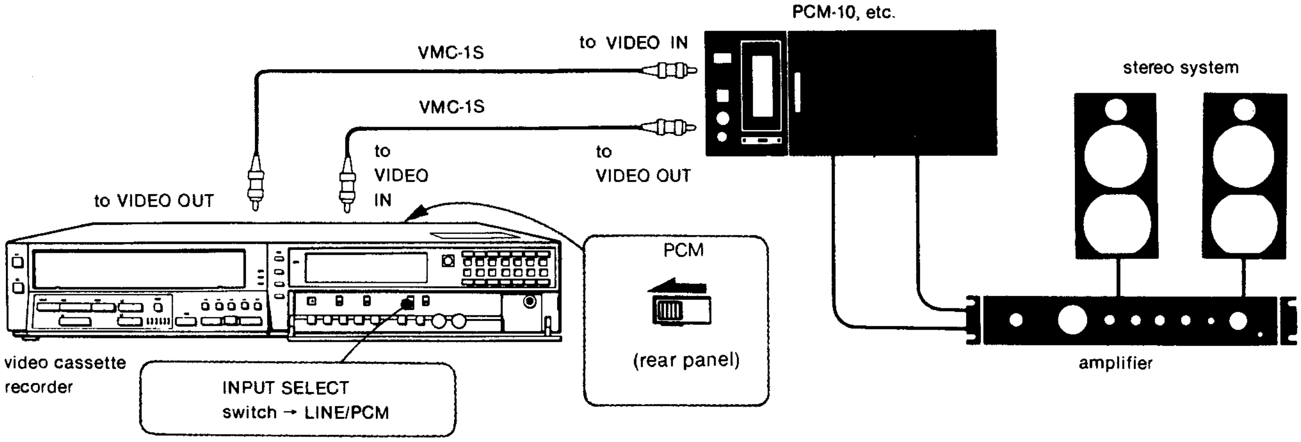
❻ Set the recorder for playback into the playback mode.

❼ Set the recorder for recording into the record mode.


VMC-1S
RK-69A
to VIDEO OUT
to AUDIO OUT
to AUDIO IN
to VIDEO IN
Recorder for playback
Recorder for recording

PCM RECORDING AND PLAYBACK

By connecting a PCM digital audio processor (Sony PCM-10, etc.) you can enjoy hi-fi sound reproduction with a wide dynamic range, minimal distortion and a flat frequency response.


PCM-10, etc.
VMC-1S
to VIDEO IN
VMC-1S
to VIDEO IN
to VIDEO OUT
to VIDEO OUT
stereo system
PCM
(rear panel)
video cassette recorder
INPUT SELECT switch → LINE/PCM
amplifier

- For optimum results, use a video cassette with a model number L-500 or less (L-250, L-125, etc.) and set the RECORD MODE selector to βII.
- For details, refer to the instruction manual furnished with the digital audio processor.

DUBBING AUDIO

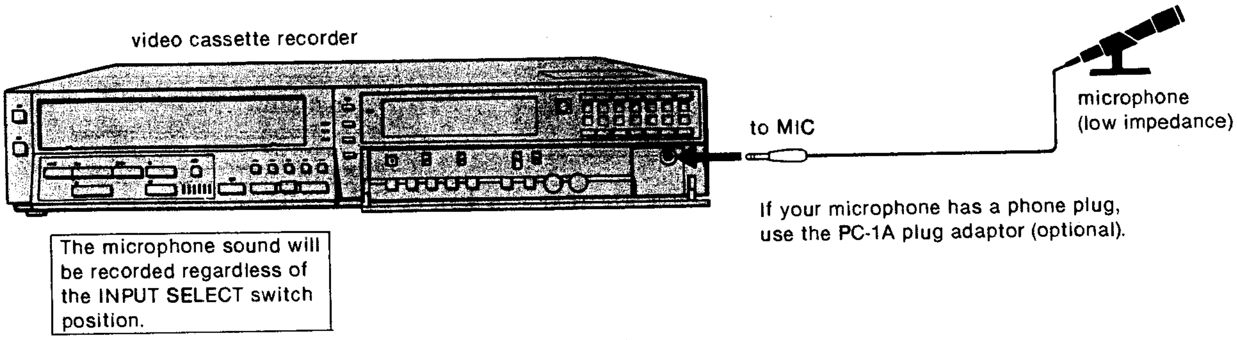
You can record a music or commentary track on any recorded tape.
You can dub the audio while watching the recorded picture.

Notes

- When a new sound track is recorded, the previously-recorded sound track will be erased, but the picture will remain.
- Audio dubbing cannot be done on a blank tape.

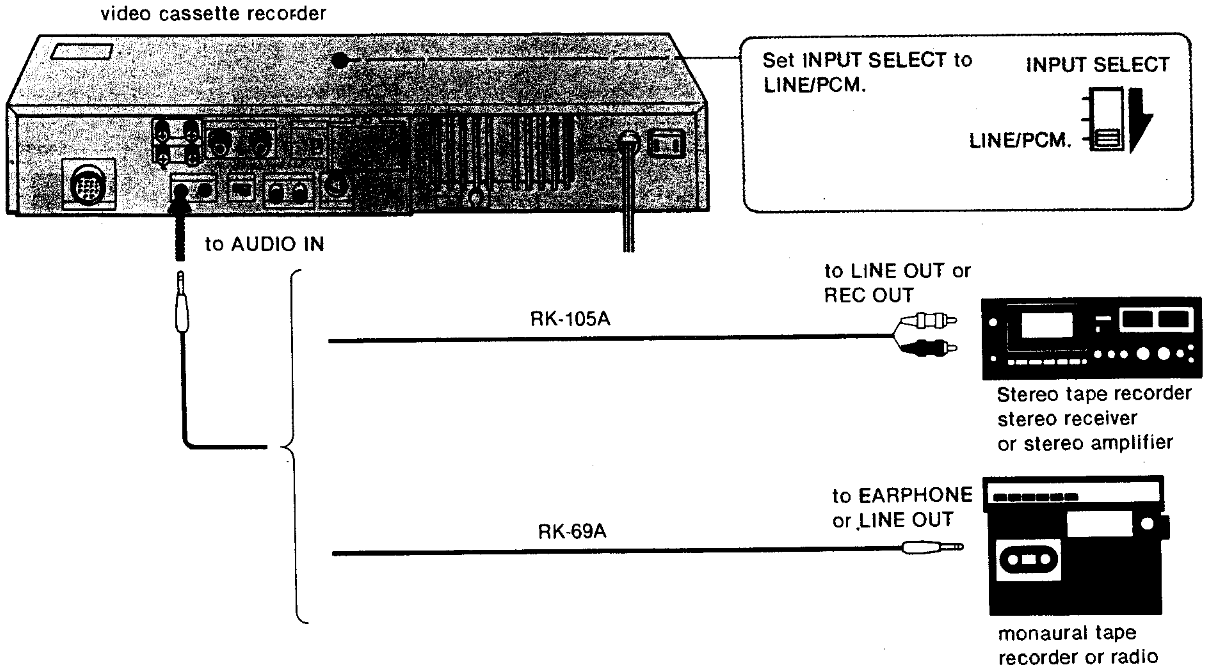
CONNECTIONS

To record microphone sound


video cassette recorder
to MIC
microphone
(low impedance)
The microphone sound will be recorded regardless of the INPUT SELECT switch position.

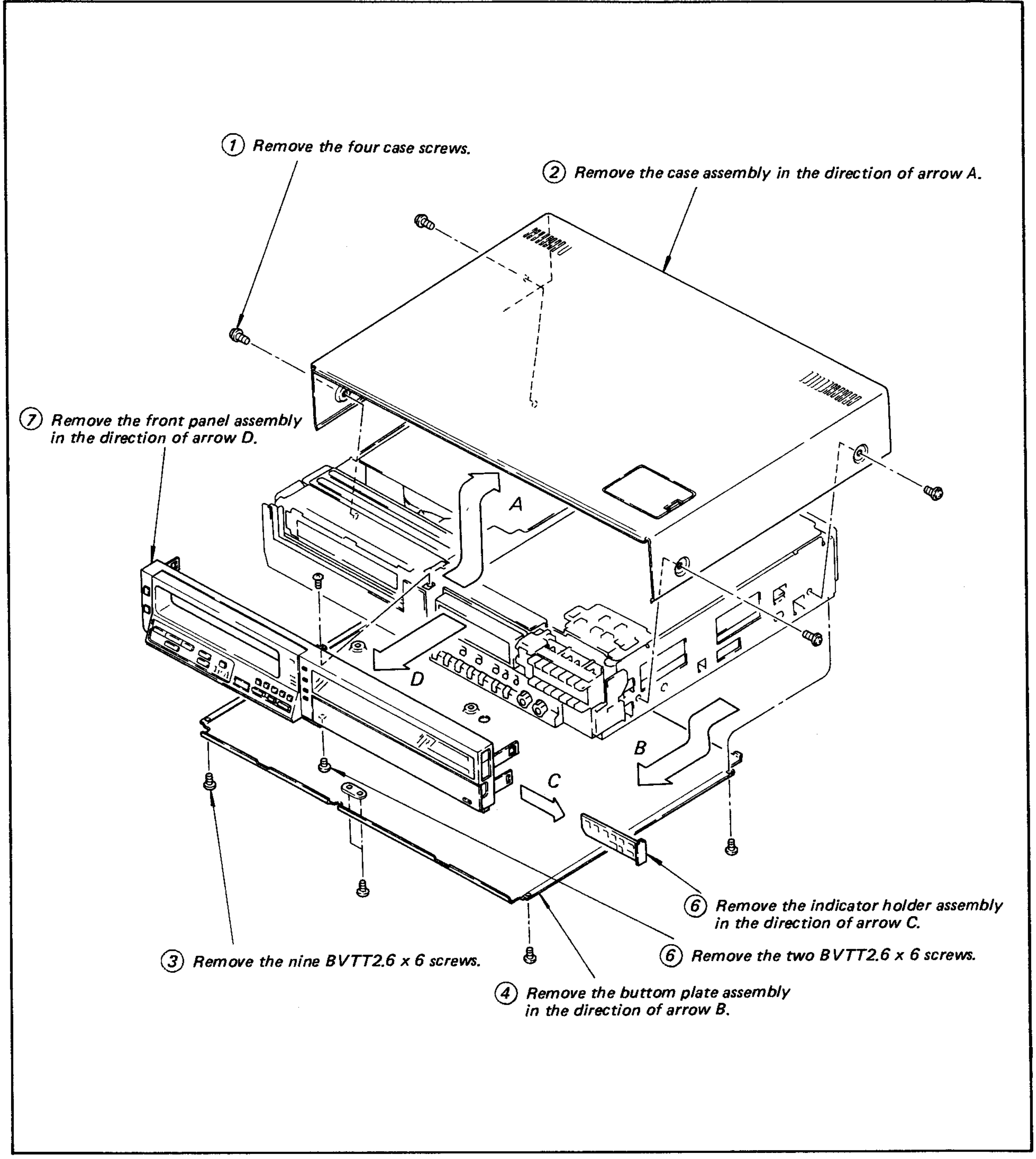
If your microphone has a phone plug, use the PC-1A plug adaptor (optional).

To record from an audio equipment


video cassette recorder
Set INPUT SELECT to LINE/PCM.
INPUT SELECT
LINE/PCM.
to AUDIO IN
RK-105A
to LINE OUT or
REC OUT
Stereo tape recorder
stereo receiver
or stereo amplifier
RK-69A
to EARPHONE
or LINE OUT
monaural tape
recorder or radio

SECTION 2
DISASSEMBLY

2-1. Cabinet Removal



① Remove the four case screws.

② Remove the case assembly in the direction of arrow A.

⑦ Remove the front panel assembly in the direction of arrow D.

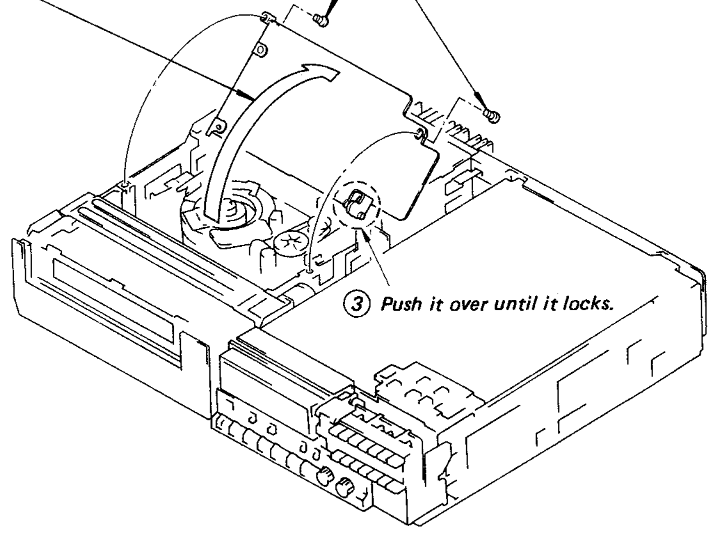
⑥ Remove the indicator holder assembly in the direction of arrow C.

③ Remove the nine BVTT2.6 x 6 screws.

⑥ Remove the two BVTT2.6 x 6 screws.

④ Remove the buttom plate assembly in the direction of arrow B.

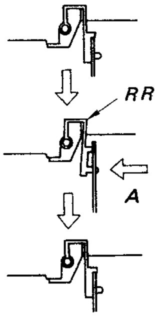
2-2. Opening RR-1A Board



① Remove the two BVTT2.6 x 6 screws.

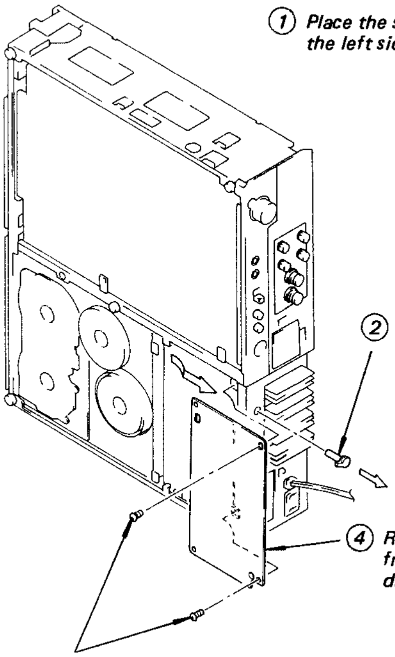
② Push the board over in the direction of the arrow.

③ Push it over until it locks.


③ locked
RR-1A plate (right)
④ unlocked
A
③ locked

④ When returning RR-1A board to the original position, push in the direction of arrow A to unlock, then secure in the original position.

2-3. Removal of VL-3 Board



① Place the set upright with the left side down.

② Pull the V knob in the direction of the arrow and remove.

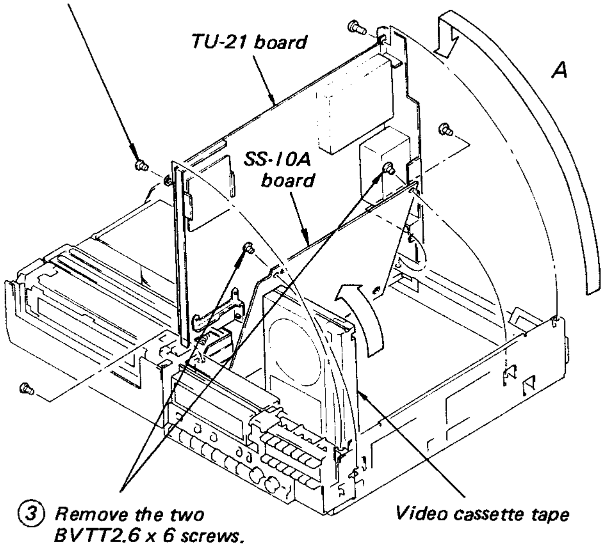
③ Remove the two BVTT2.6 x 6 screws.

④ Remove VL-3 board from the set in the direction of arrow A.

2-4. Opening TU-21, SS-10A Board

② Push the TU-21 board upright in the direction of arrow A, and lower in the direction of the arrow to lock.

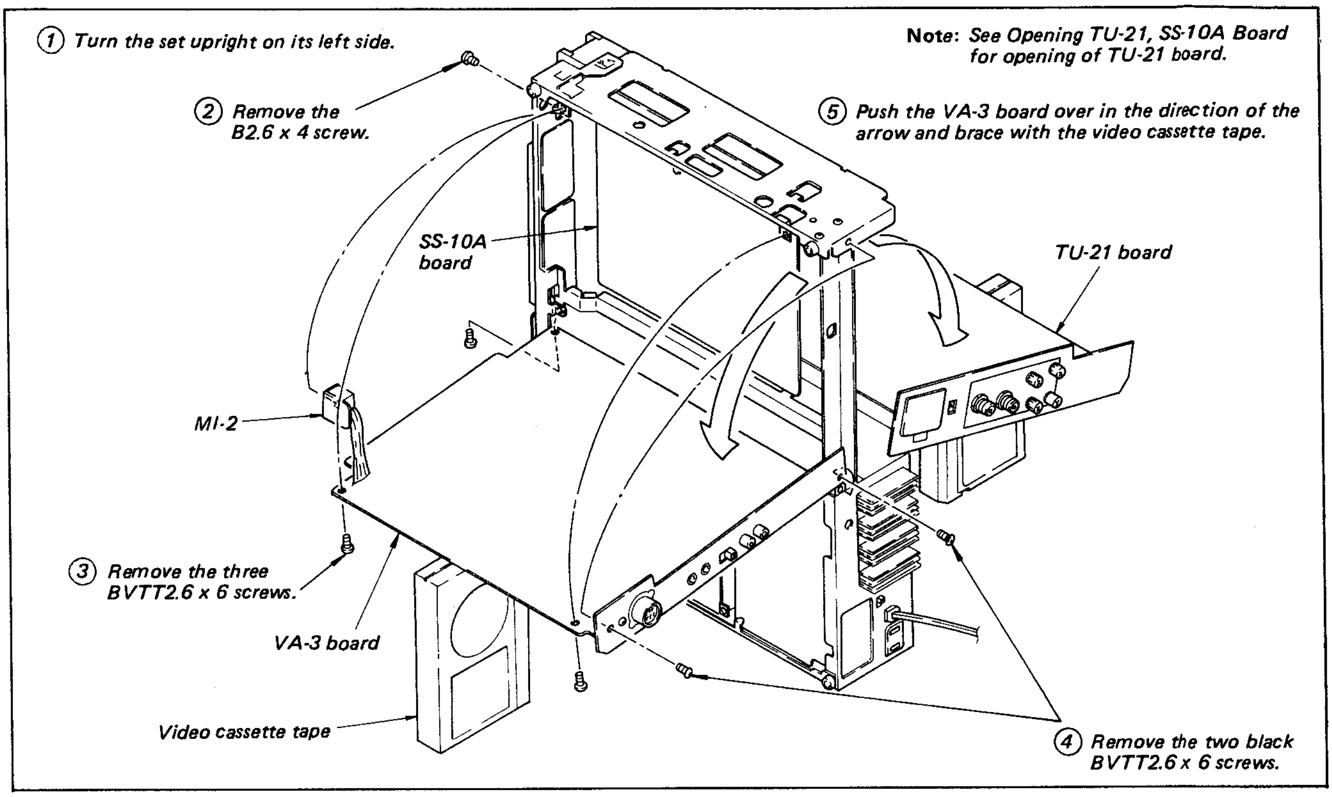
① Remove the four BVTT2.6 x 6 screws.


TU-21 board
A
SS-10A board
Video cassette tape

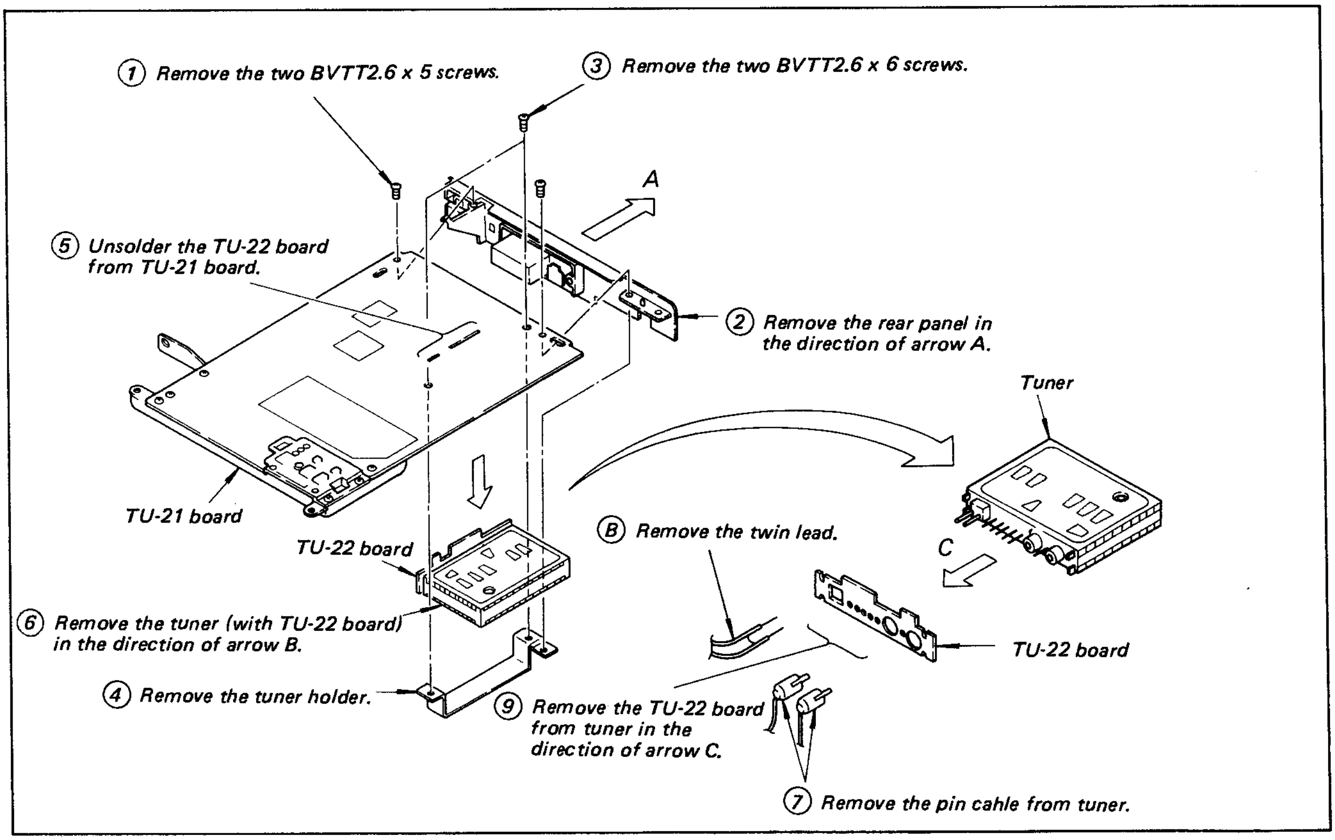
③ Remove the two BVTT2.6 x 6 screws.

④ Push the SS-10A board upright in the direction of arrow B, and brace with the video cessette tape.

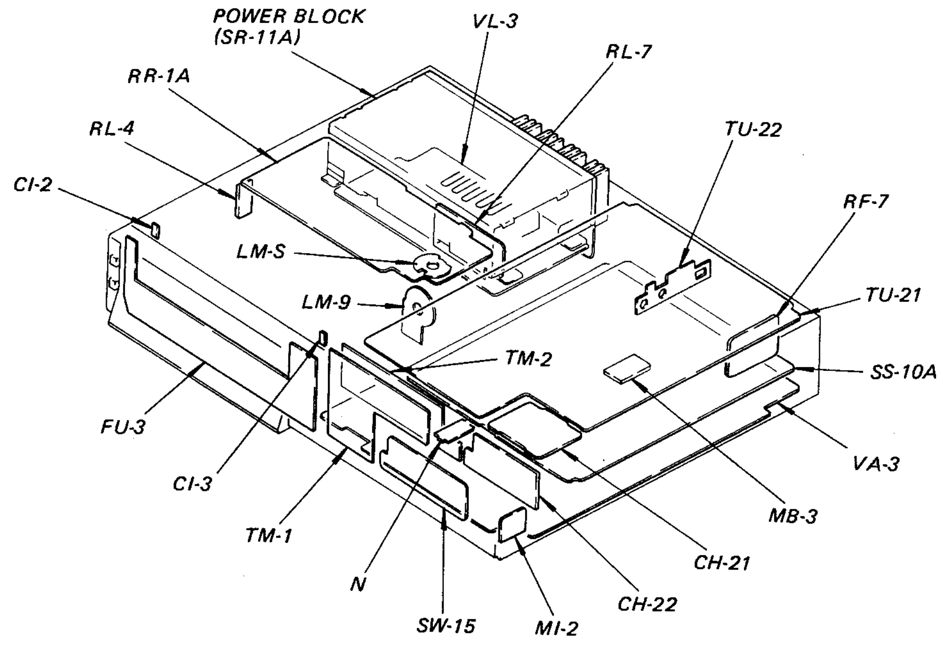
2-5. Opening TU-21, SS-10A, VA-3 and MI-2 Board (Check)


① Turn the set upright on its left side.
② Remove the B2.6 x 4 screw.
SS-10A board
MI-2
③ Remove the three BVTT2.6 x 6 screws.
VA-3 board
Video cassette tape
Note: See Opening TU-21, SS-10A Board for opening of TU-21 board.
⑤ Push the VA-3 board over in the direction of the arrow and brace with the video cassette tape.
TU-21 board
④ Remove the two black BVTT2.6 x 6 screws.

2-6. Tuner Removal

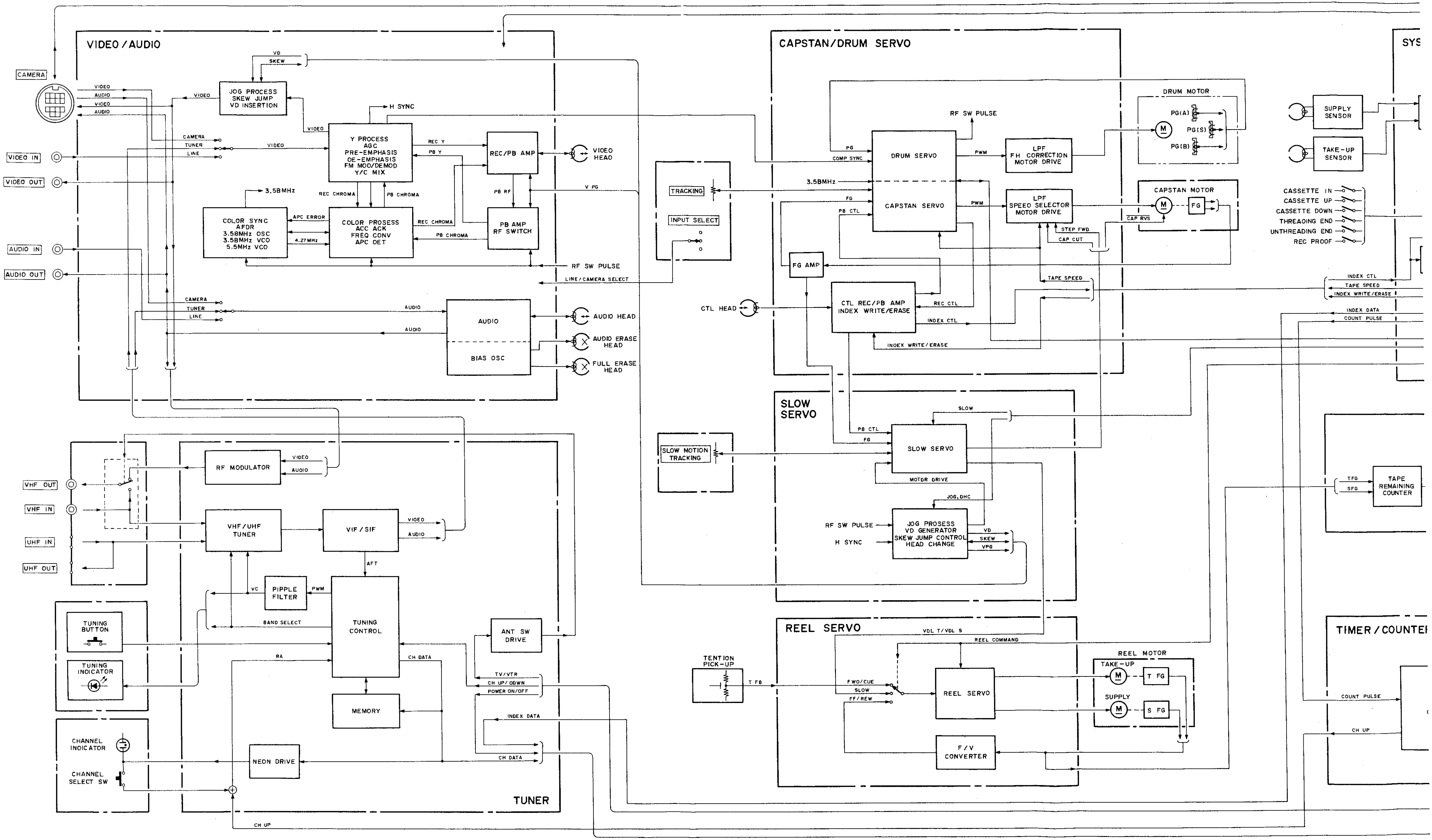

① Remove the two BVTT2.6 x 5 screws.
③ Remove the two BVTT2.6 x 6 screws.
A
⑤ Unsolder the TU-22 board from TU-21 board.
② Remove the rear panel in the direction of arrow A.
Tuner
TU-21 board
TU-22 board
⑧ Remove the twin lead.
C
⑥ Remove the tuner (with TU-22 board) in the direction of arrow B.
TU-22 board
④ Remove the tuner holder.
⑨ Remove the TU-22 board from tuner in the direction of arrow C.
⑦ Remove the pin cahle from tuner.

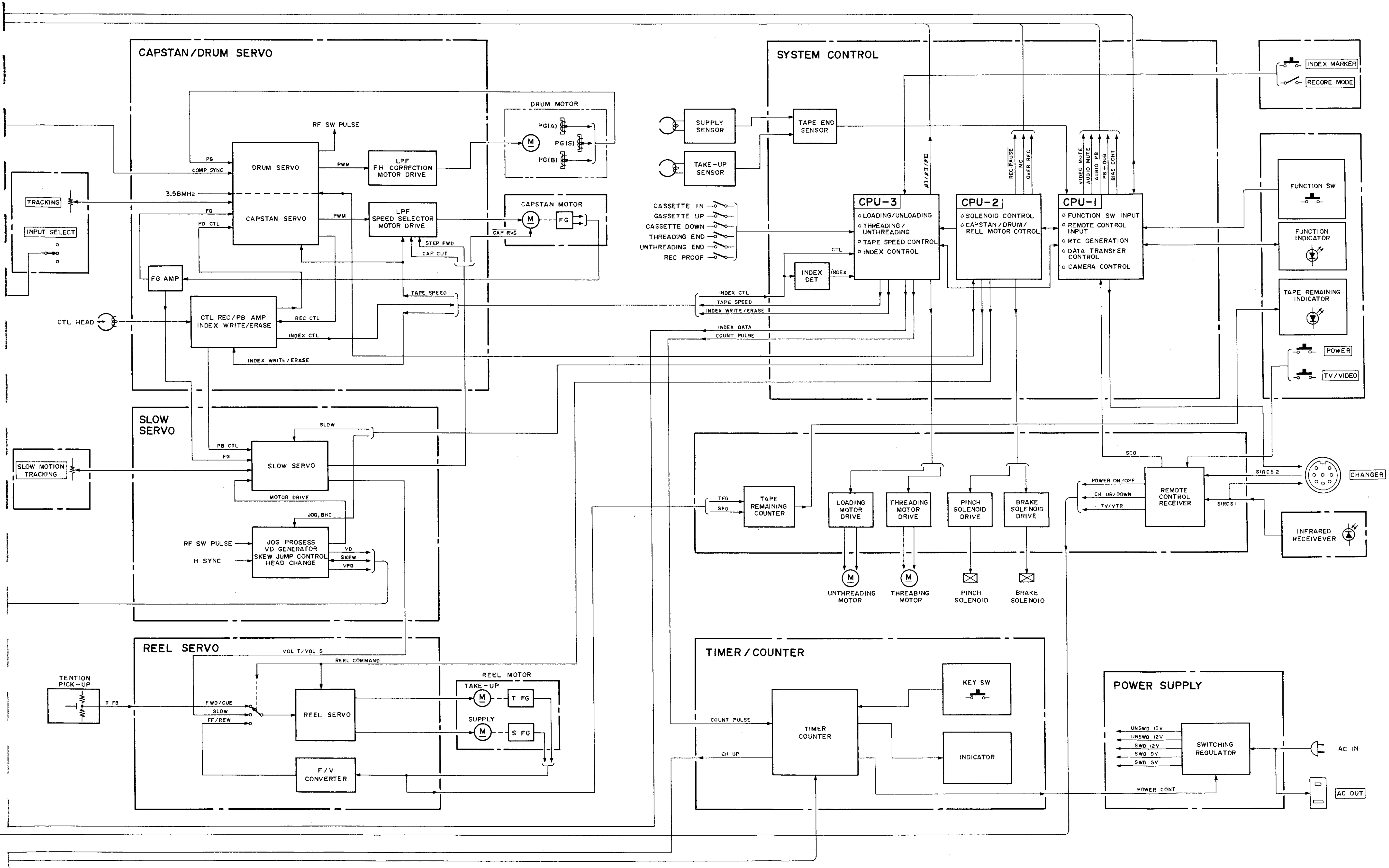
CIRCUIT BOARDS LOCATION


POWER BLOCK (SR-11A)
VL-3
RL-7
RR-1A
RL-4
TU-22
CI-2
RF-7
LM-S
LM-9
TU-21
TM-2
SS-10A
FU-3
VA-3
CI-3
MB-3
TM-1
CH-21
N
CH-22
SW-15
MI-2

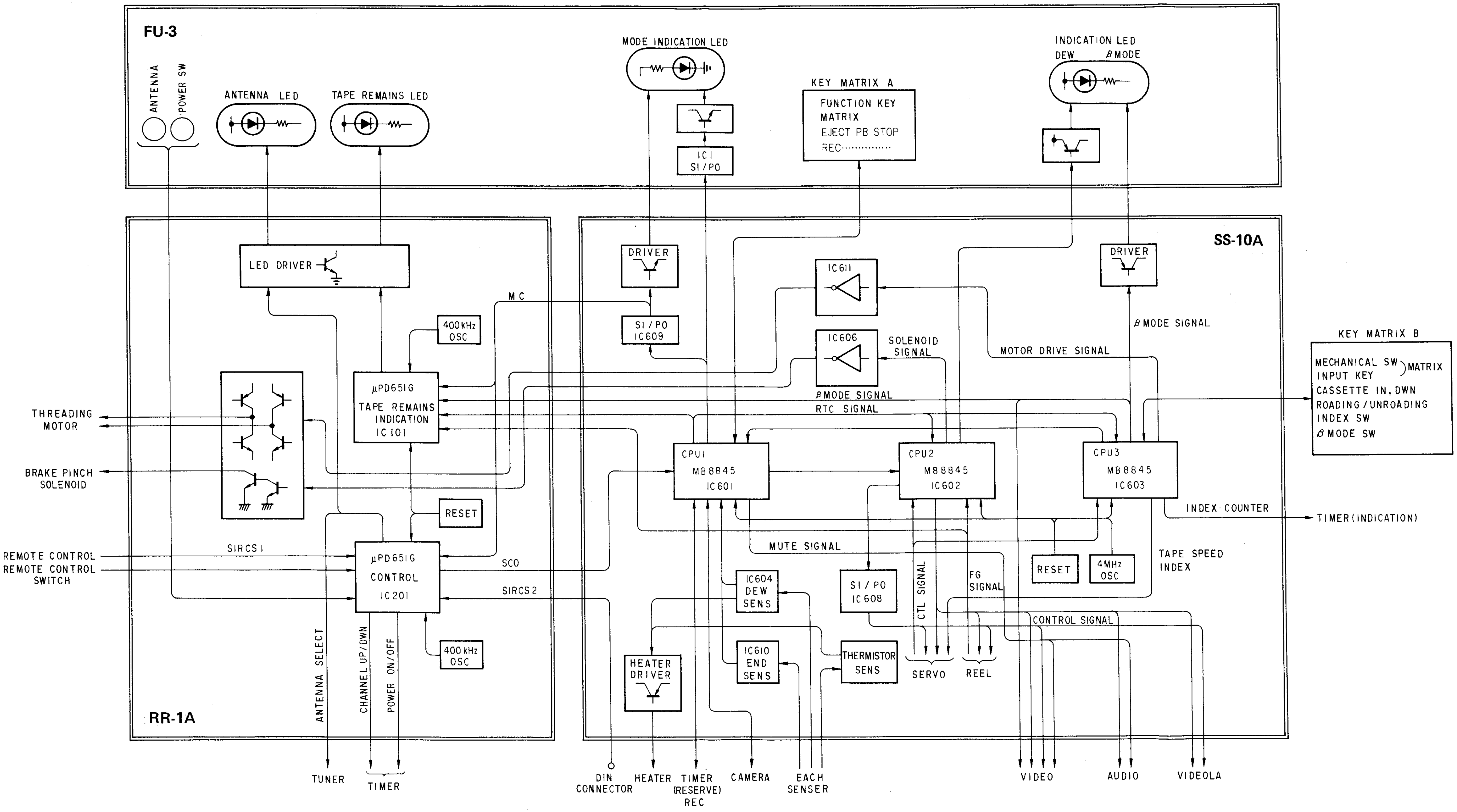
SECTION 3
BLOCK DIAGRAMS

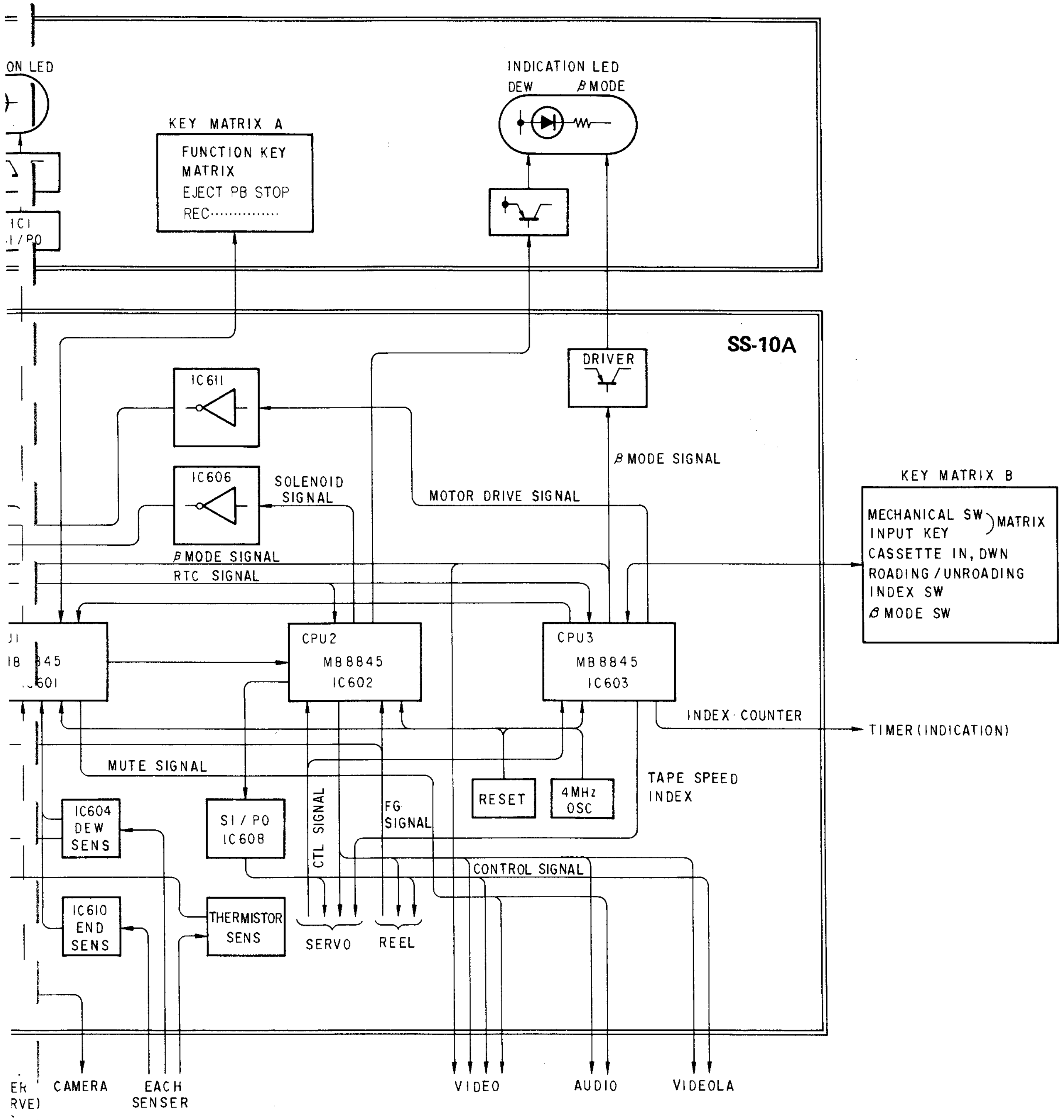
OVERALL BLOCK DIAGRAM


VIDEO / AUDIO
CAMERA
VIDEO
AUDIO
VIDEO
AUDIO
VD
SKEW
JOG PROCESS
SKEW JUMP
VD INSERTION
VIDEO
H SYNC
VIDEO
CAMERA
TUNER
LINE
VIDEO IN
VIDEO OUT
VIDEO
Y PROCESS
AGC
PRE-EMPHASIS
DE-EMPHASIS
FM MOD/DEMOD
Y/C MIX
REC Y
PB Y
REC/PB AMP
VIDEO HEAD
V PG
3.58MHz
REC CHROMA
PB CHROMA
PB RF
COLOR SYNC
AFDR
3.58MHz OSC
3.58MHz VCO
5.5MHz VCO
APC ERROR
4.27MHz
COLOR PROSESS
ACC ACK
FREQ CONV
APC DET
REC CHROMA
PB CHROMA
PB AMP
RF SWITCH
RF SW PULSE
LINE/CAMERA SELECT
AUDIO IN
AUDIO OUT
CAMERA
TUNER
LINE
AUDIO
AUDIO
AUDIO
BIAS OSC
AUDIO HEAD
AUDIO ERASE HEAD
FULL ERASE HEAD
TRACKING
INPUT SELECT
SLOW MOTION TRACKING
VHF OUT
VHF IN
UHF IN
UHF OUT
RF MODULATOR
VIDEO
AUDIO
VHF/UHF TUNER
VIF/SIF
VIDEO
AUDIO
AFT
VC
PIPPLE FILTER
PWM
BAND SELECT
TUNING CONTROL
TUNING BUTTON
TUNING INDICATOR
RA
CH DATA
ANT SW DRIVE
TV/VTR
CH UP/DOWN
POWER ON/OFF
INDEX DATA
MEMORY
CHANNEL INDICATOR
CHANNEL SELECT SW
NEON DRIVE
CH DATA
TUNER
CH UP
CAPSTAN/DRUM SERVO
RF SW PULSE
PG
COMP SYNC
DRUM SERVO
PWM
LPF
FH CORRECTION
MOTOR DRIVE
DRUM MOTOR
PG(A)
PG(S)
PG(B)
3.58MHz
FG
PB CTL
CAPSTAN SERVO
PWM
LPF
SPEED SELECTOR
MOTOR DRIVE
CAPSTAN MOTOR
FG
CAP RVS
STEP FWD
CAP CUT
FG AMP
TAPE SPEED
CTL HEAD
CTL REC/PB AMP
INDEX WRITE/ERASE
REC CTL
INDEX CTL
INDEX WRITE/ERASE
SLOW SERVO
SLOW
PB CTL
FG
SLOW SERVO
MOTOR DRIVE
JOG, DHC
RF SW PULSE
H SYNC
JOG PROSESS
VD GENERATOR
SKEW JUMP CONTROL
HEAD CHANGE
VD
SKEW
VPG
REEL SERVO
VDL T/VDL S
REEL COMMAND
TENTION PICK-UP
T FB
FWD/CUE
SLOW
FF/REW
REEL SERVO
F/V CONVERTER
REEL MOTOR
TAKE-UP
T FG
SUPPLY
S FG
SYS
SUPPLY SENSOR
TAKE-UP SENSOR
CASSETTE IN
CASSETTE UP
CASSETTE DOWN
THREADING END
UNTHREADING END
REC PROOF
INDEX CTL
TAPE SPEED
INDEX WRITE/ERASE
INDEX DATA
COUNT PULSE
TFG
SFG
TAPE REMAINING COUNTER
TIMER / COUNTER
COUNT PULSE
CH UP

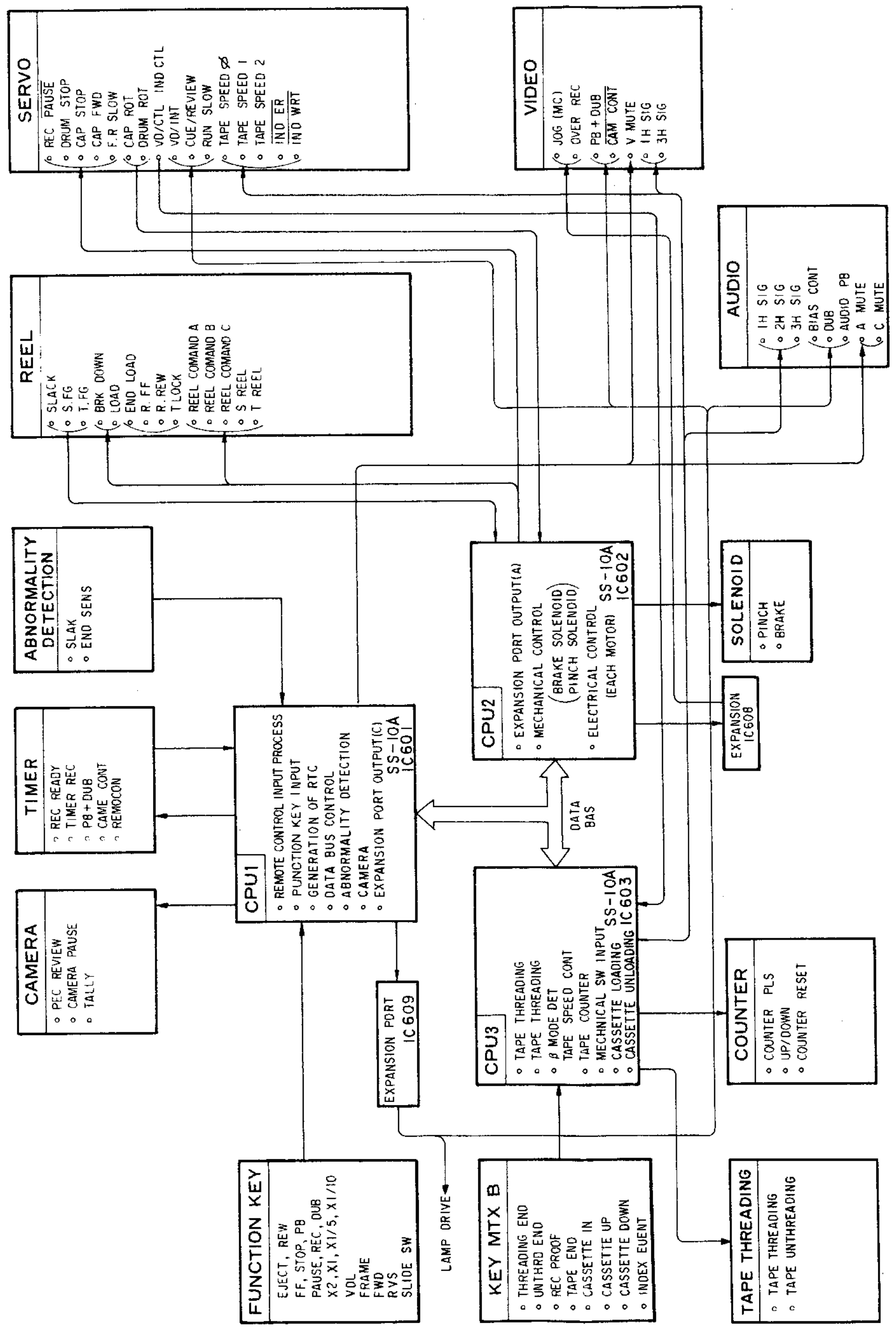

CAPSTAN/DRUM SERVO
RF SW PULSE
PG
COMP SYNC
DRUM SERVO
PWM
LPF
FH CORRECTION
MOTOR DRIVE
DRUM MOTOR
PG(A)
PG(S)
PG(B)
M
3.58MHz
FG
PD CTL
CAPSTAN SERVO
PWM
LPF
SPEED SELECTOR
MOTOR DRIVE
CAPSTAN MOTOR
FG
CAP RVS
STEP FWD
CAP CUT
TAPE SPEED
TRACKING
INPUT SELECT
FG AMP
CTL HEAD
CTL REC/PB AMP
INDEX WRITE/ERASE
REC CTL
INDEX CTL
INDEX WRITE/ERASE
SLOW SERVO
SLOW
PB CTL
FG
SLOW SERVO
MOTOR DRIVE
JOG,BHC
SLOW MOTION TRACKING
RF SW PULSE
H SYNC
JOG PROSESS
VD GENERATOR
SKEW JUMP CONTROL
HEAD CHANGE
VD
SKEW
VPG
REEL SERVO
VDL T/VDL S
REEL COMMAND
TENTION PICK-UP
T FB
FWD/CUE
SLOW
FF/REW
REEL SERVO
REEL MOTOR
TAKE-UP
T FG
SUPPLY
S FG
F/V CONVERTER
SYSTEM CONTROL
SUPPLY SENSOR
TAKE-UP SENSOR
TAPE END SENSOR
CASSETTE IN
CASSETTE UP
CASSETTE DOWN
THREADING END
UNTHREADING END
REC PROOF
Ø1/Ø II/Ø III
REC-PAUSE
MC
OVER REC
VIDEO MUTE
AUDIO MUTE
AUDIO PB
PB + DUB
BIAS CONT
CPU-3
o LOADING/UNLOADING
o THREADING/UNTHREADING
o TAPE SPEED CONTROL
o INDEX CONTROL
CPU-2
o SOLENOID CONTROL
o CAPSTAN/DRUM/RELL MOTOR COTROL
CPU-1
o FUNCTION SW INPUT
o REMOTE CONTROL INPUT
o RTC GENERATION
o DATA TRANSFER CONTROL
o CAMERA CONTROL
CTL
INDEX DET
INDEX
INDEX CTL
TAPE SPEED
INDEX WRITE/ERASE
INDEX DATA
COUNT PULSE
INDEX MARKER
RECORE MODE
FUNCTION SW
FUNCTION INDICATOR
TAPE REMAINING INDICATOR
POWER
TV/VIDEO
TFG
SFG
TAPE REMAINING COUNTER
LOADING MOTOR DRIVE
THREADING MOTOR DRIVE
PINCH SOLENOID DRIVE
BRAKE SOLENOID DRIVE
UNTHREADING MOTOR
THREABING MOTOR
PINCH SOLENOID
BRAKE SOLENOID
SCO
POWER ON/OFF
CH UP/DOWN
TV/VTR
REMOTE CONTROL RECEIVER
SIRCS 2
SIRCS 1
CHANGER
INFRARED RECEIVEVER
TIMER/COUNTER
KEY SW
COUNT PULSE
TIMER COUNTER
CH UP
INDICATOR
POWER SUPPLY
UNSWD 15V
UNSWD 12V
SWD 12V
SWD 9V
SWD 5V
SWITCHING REGULATOR
POWER CONT
AC IN
AC OUT

SYSTEM CONTROL BLOCK DIAGRAM


FU-3
ANTENNA
POWER SW
ANTENNA LED
TAPE REMAINS LED
MODE INDICATION LED
IC1
SI/PO
KEY MATRIX A
FUNCTION KEY MATRIX
EJECT PB STOP
REC···············
INDICATION LED
DEW
β MODE
RR-1A
LED DRIVER
MC
400kHz OSC
μPD651G
TAPE REMAINS INDICATION
IC101
THREADING MOTOR
BRAKE PINCH SOLENOID
RESET
REMOTE CONTROL
REMOTE CONTROL SWITCH
SIRCS1
μPD651G
CONTROL
IC201
SCO
SIRCS2
400kHz OSC
ANTENNA SELECT
CHANNEL UP/DWN
POWER ON/OFF
TUNER
TIMER
SS-10A
DRIVER
SI/PO
IC609
IC611
IC606
SOLENOID SIGNAL
MOTOR DRIVE SIGNAL
β MODE SIGNAL
RTC SIGNAL
DRIVER
β MODE SIGNAL
CPU1
MB8845
IC601
CPU2
MB8845
IC602
CPU3
MB8845
IC603
KEY MATRIX B
MECHANICAL SW
INPUT KEY
MATRIX
CASSETTE IN, DWN
ROADING/UNROADING
INDEX SW
β MODE SW
INDEX·COUNTER
TIMER(INDICATION)
MUTE SIGNAL
IC604
DEW
SENS
SI/PO
IC608
CTL SIGNAL
FG SIGNAL
RESET
4MHz OSC
TAPE SPEED
INDEX
CONTROL SIGNAL
HEATER DRIVER
IC610
END
SENS
THERMISTOR SENS
SERVO
REEL
DIN CONNECTOR
HEATER
TIMER (RESERVE) REC
CAMERA
EACH SENSER
VIDEO
AUDIO
VIDEOLA


ON LED
I C I
I / PO
KEY MATRIX A
FUNCTION KEY
MATRIX
EJECT PB STOP
REC··············
INDICATION LED
DEW
β MODE
SS-10A
IC611
IC606
SOLENOID
SIGNAL
DRIVER
β MODE SIGNAL
MOTOR DRIVE SIGNAL
β MODE SIGNAL
RTC SIGNAL
KEY MATRIX B
MECHANICAL SW
INPUT KEY
MATRIX
CASSETTE IN, DWN
ROADING / UNROADING
INDEX SW
β MODE SW
MB 845
IC601
CPU2
MB8845
IC602
CPU3
MB8845
IC603
INDEX COUNTER
TIMER (INDICATION)
MUTE SIGNAL
TAPE SPEED
INDEX
RESET
4MHz
OSC
IC604
DEW
SENS
SI / PO
IC608
CTL SIGNAL
FG
SIGNAL
CONTROL SIGNAL
IC610
END
SENS
THERMISTOR
SENS
SERVO
REEL
ER
RVE)
CAMERA
EACH
SENSER
VIDEO
AUDIO
VIDEOLA

SYSTEM CONTROL BLOCK DIAGRAM (1)


SERVO
REC PAUSE
DRUM STOP
CAP STOP
CAP FWD
F.R SLOW
CAP ROT
DRUM ROT
VD/CTL IND CTL
VD/INT
CUE/REVIEW
RUN SLOW
TAPE SPEED Ø
TAPE SPEED 1
TAPE SPEED 2
IND ER
IND WRT
VIDEO
JOG (MC)
OVER REC
PB + DUB
CAM CONT
V MUTE
1H SIG
3H SIG
AUDIO
1H SIG
2H SIG
3H SIG
BIAS CONT
DUB
AUDIO PB
A MUTE
C MUTE
REEL
SLACK
S.FG
T.FG
BRK DOWN
LOAD
END LOAD
R. FF
R. REW
T LOCK
REEL COMAND A
REEL COMAND B
REEL COMAND C
S REEL
T REEL
ABNORMALITY DETECTION
SLAK
END SENS
TIMER
REC READY
TIMER REC
PB + DUB
CAME CONT
REMOCON
CAMERA
PEC REVIEW
CAMERA PAUSE
TALLY
CPU1
REMOTE CONTROL INPUT PROCESS
PUNCTION KEY INPUT
GENERATION OF RTC
DATA BUS CONTROL
ABNORMALITY DETECTION
CAMERA
EXPANSION PORT OUTPUT(C)
SS-10A
IC601
CPU2
EXPANSION PORT OUTPUT(A)
MECHANICAL CONTROL
(BRAKE SOLENOID)
(PINCH SOLENOID)
ELECTRICAL CONTROL
(EACH MOTOR)
SS-10A
IC602
SOLENOID
PINCH
BRAKE
EXPANSION
IC608
DATA
BAS
CPU3
TAPE THREADING
TAPE THREADING
β MODE DET
TAPE SPEED CONT
TAPE COUNTER
MECHNICAL SW INPUT
CASSETTE LOADING
CASSETTE UNLOADING
SS-10A
IC603
EXPANSION PORT
IC609
COUNTER
COUNTER PLS
UP/DOWN
COUNTER RESET
FUNCTION KEY
EJECT, REW
FF, STOP, PB
PAUSE, REC, DUB
X2, X1, X1/5, X1/10
VOL
FRAME
FWD
RVS
SLIDE SW
LAMP DRIVE
KEY MTX B
THREADING END
UNTHRD END
REC PROOF
TAPE END
CASSETTE IN
CASSETTE UP
CASSETTE DOWN
INDEX EUENT
TAPE THREADING
TAPE THREADING
TAPE UNTHREADING

SYSTEM CONTROL CIRCUIT AND MECHANISM INTERFACE

SIGNAL	MODE I/O	Pin No.
BRAKE PLUNGER ON*1	O	CN621-5
BRAKE PLUNGER OFF*1	O	CN621-4
PINCH PLUNGER ON*1	O	CN621-3
PINCH PLUNGER OFF*1	O	CN621-2
THREADING MOTOR (+)*1	O	CN621-6
THREADING MOTOR (–)*1	O	CN621-7
CASSETTE LOADING MOTOR (+)	O	CN621-8
CASSETTE LOADING MOTOR (–)	O	CN621-9
REC PROOF SW (A)*2	I	CN615-4 CPU3 16 Pin (K3)
REC PROOF SW (B)*2	O	CN515-3 CPU3 29 Pin (P1)
CASSETTE IN SW (A)*2	I	CN616-4 CPU3 13 Pin (K0)
CASSETTE IN SW (B)*2	O	CN616-1 CPU3 29 Pin (P1)
CASSETTE DWN SW A	I	CN616-2
CASSETTE DWN SW B	O	CN616-1
CASSETTE UP SW A	I	CN516-3
CASSETTE UP SW B	O	CN616-1
LOADING END SW (A)*2	I	CN615-4 CPU3 16 Pin (K3)
LOADING ENO SW (B)*2	O	CN615-1 CPU3 32 Pin (P3)
UNLOADING END SW (A)*2	I	CN615-4 CPU3 16 Pin (K3)
UNLOAOING END SW (B)*2	O	CN615-2 CPU3 31 Pin (P2)
S SENSOR OUT*4	I	CN604-6 IC609 (H42) 7 Pin
T SENSOR OUT*5	I	CN604-5 IC609 (H42) 3 Pin

*1 control signal for brake solenoid, pinch roller solenoid and threading motor
*2 key matrix signal
*3 when detecting dew
*4 osc freq 600 kHz at tape end
*5 osc freq 600 kHz at tape end

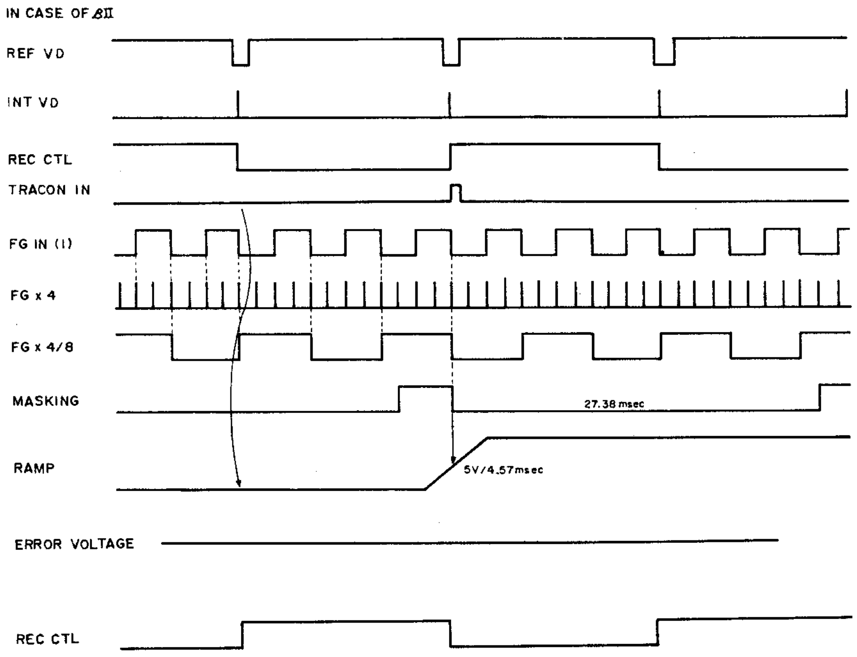
SYSTEM CONTROL CIRCUIT AND TUNER CIRCUIT INTERFACE

MODE SIGNAL*1	I/O	Pin No.	STOP	PB	REC	FF	REW	CUE	REV	PB PAUSE	REC PAUSE	THREADING	EJECT	DUB	DUB PAUSE
REC·$\overline{\text{PAUSE}}$	O	CN620-5	L	L	H	L	L	L	L	L	L	L	L	L	L
INDEX (3) *2	O	CN620-4 CPU3 40 Pin ($\overline{O}$7)													
INDEX (2)	O	CN620-3 CPU3 39 Pin ($\overline{O}$6)													
INDEX (1)	O	CN620-3 CPU3 38 Pin ($\overline{O}$5)													
INDEX (0)	O	CN620-1 CPU3 37 Pin ($\overline{O}$4)													

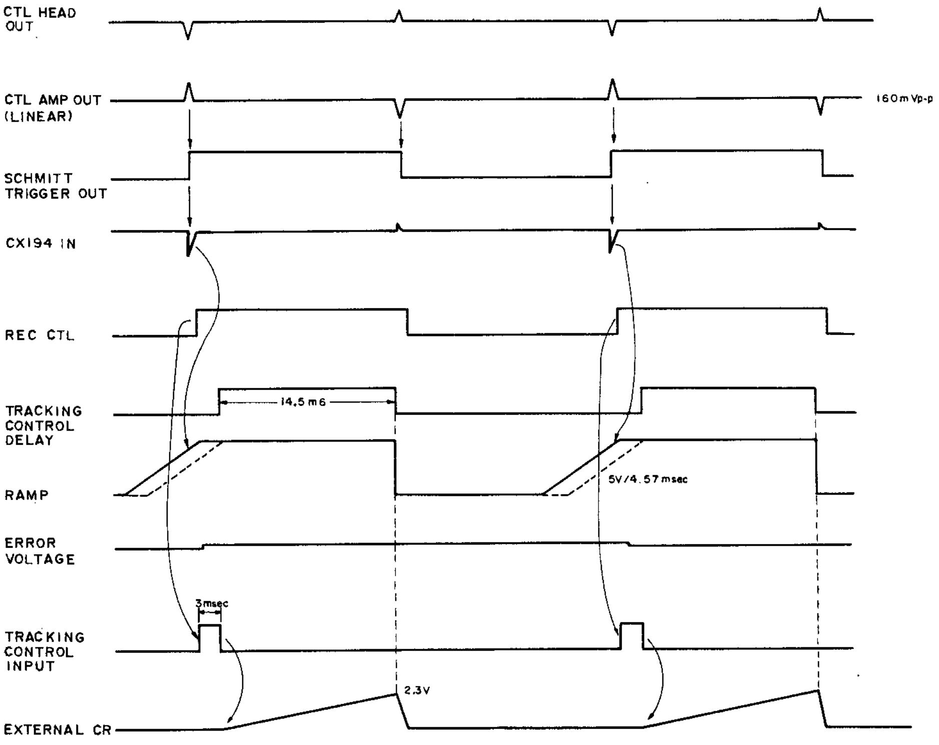
* 1 Signal is correspond to connector (refer to Pin No.)

* 2 $\underbrace{0_H \sim 9_H;}_{\text{4 bit-binary}}$ Index indication, E_H: "IND" Flash, F_H: "IND", "8" Lamp OFF, when power is OFF, Tuner block side is no use signal.

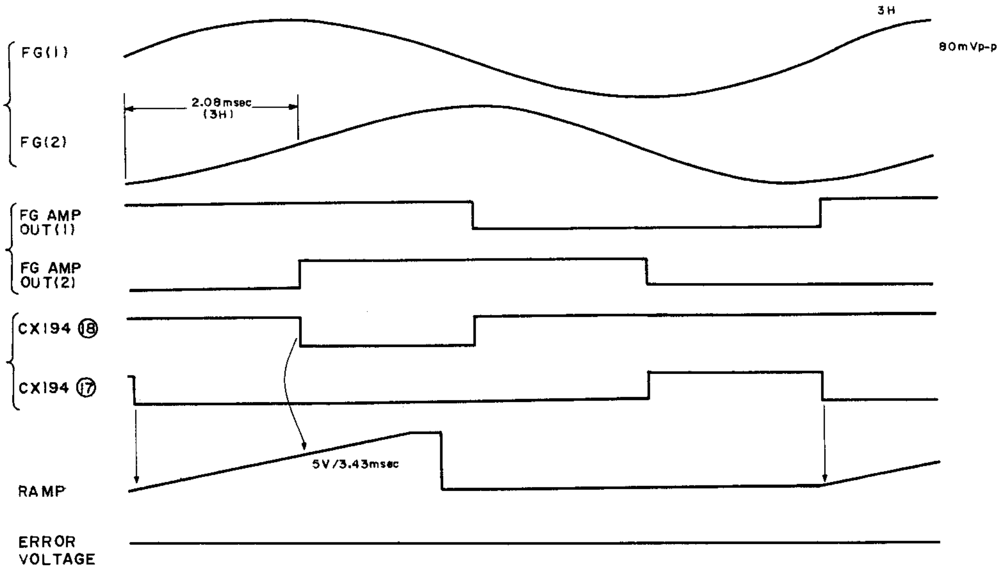
CAPSTAN PHASE SYSTEM TIMING CHART (REC)


IN CASE OF βII
REF VD
INT VD
REC CTL
TRACON IN
FG IN (1)
FG x 4
FG x 4/8
MASKING
27.38 msec
RAMP
5V/4.57msec
ERROR VOLTAGE
REC CTL

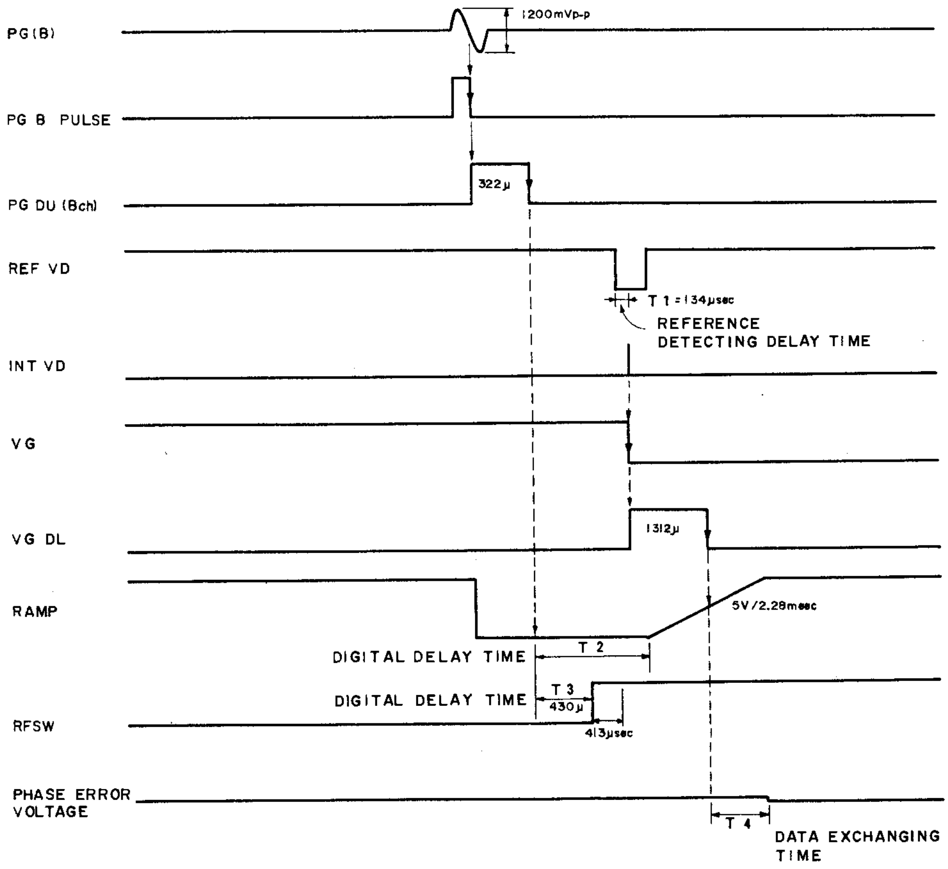
CAPSTAN PHASE SYSTEM TIMING CHART (PB)


CTL HEAD OUT
CTL AMP OUT (LINEAR)
160mVp-p
SCHMITT TRIGGER OUT
CX194 IN
REC CTL
TRACKING CONTROL DELAY
14.5 m6
RAMP
5V/4.57msec
ERROR VOLTAGE
3msec
TRACKING CONTROL INPUT
2.3V
EXTERNAL CR

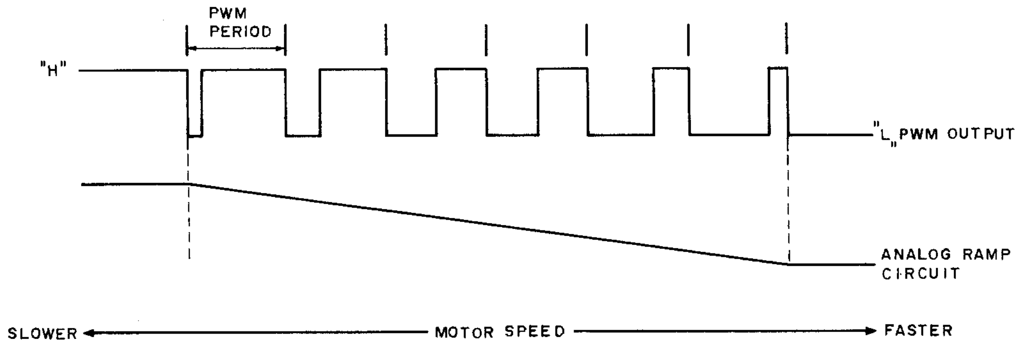
CAPSTAN SPEED SYSTEM TIMING CHART


FG(1)
FG(2)
3H
80mVp-p
2.08msec (3H)
FG AMP OUT(1)
FG AMP OUT(2)
CX194 ⑱
CX194 ⑰
5V/3.43msec
RAMP
ERROR VOLTAGE

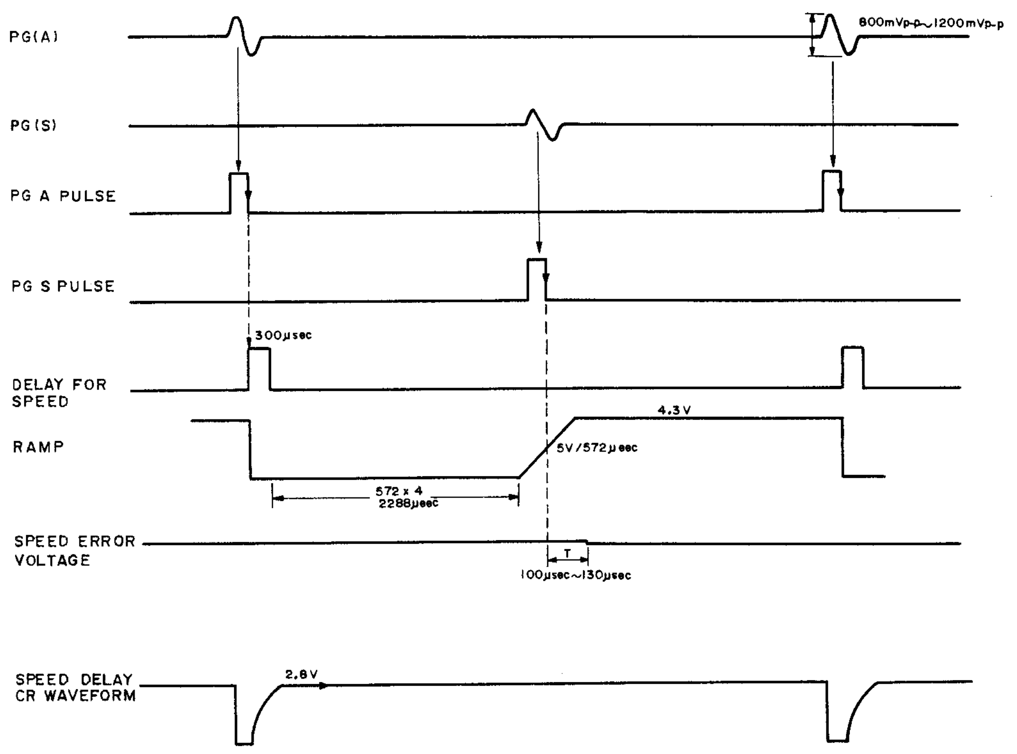
DRUM PHASE SYSTEM TIMING CHART


PG(B)
1200mVp-p
PG B PULSE
PG DU (Bch)
322μ
REF VD
T 1 = 134μsec
REFERENCE DETECTING DELAY TIME
INT VD
VG
VG DL
1312μ
RAMP
5V/2.28msec
DIGITAL DELAY TIME
T 2
DIGITAL DELAY TIME
T 3
430μ
413μsec
RFSW
PHASE ERROR VOLTAGE
T 4
DATA EXCHANGING TIME

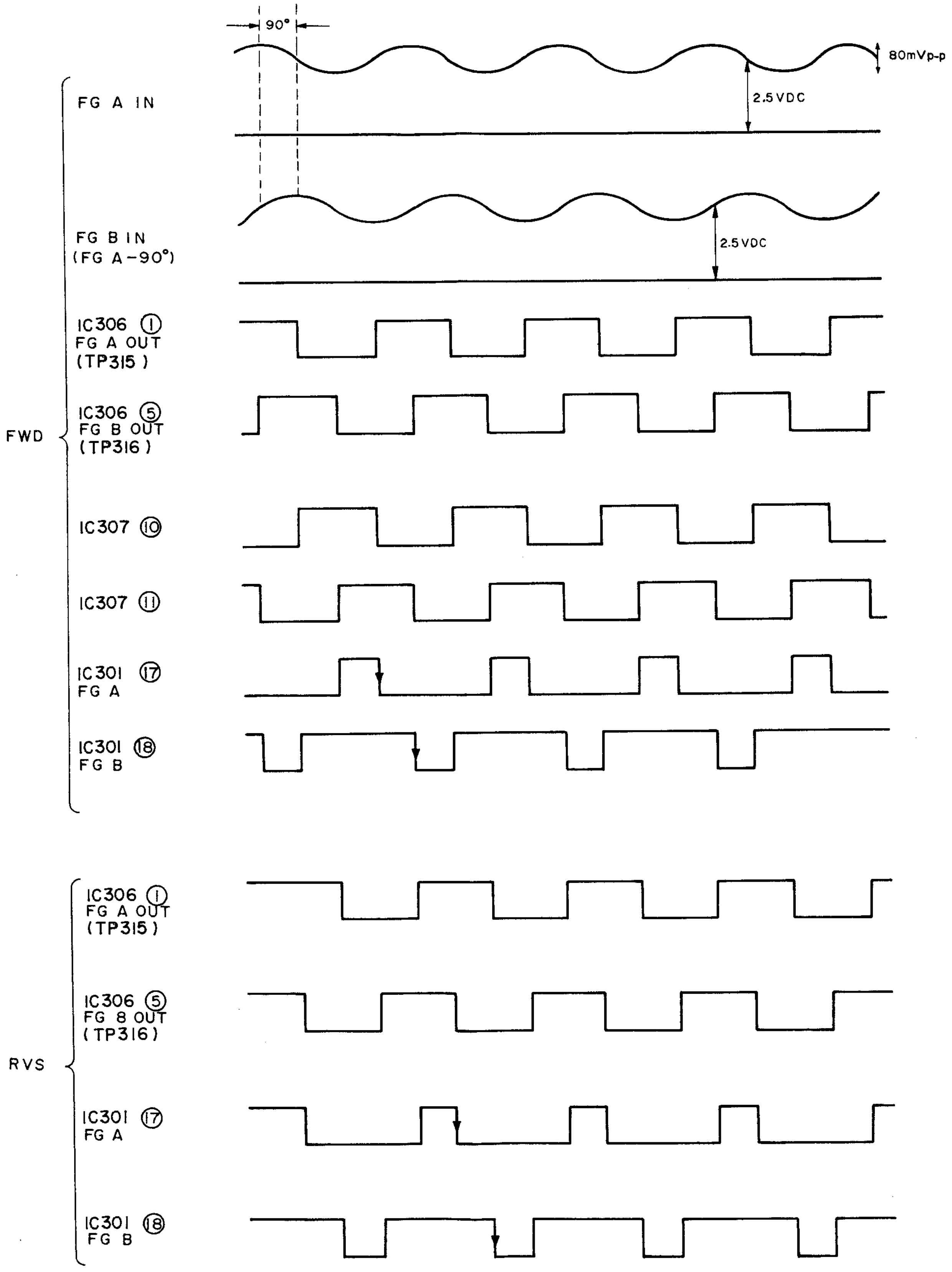
INSTRUMENTATION COUNTER TIMING CHART


PWM PERIOD
"H"
"L" PWM OUTPUT
ANALOG RAMP CIRCUIT
SLOWER
MOTOR SPEED
FASTER

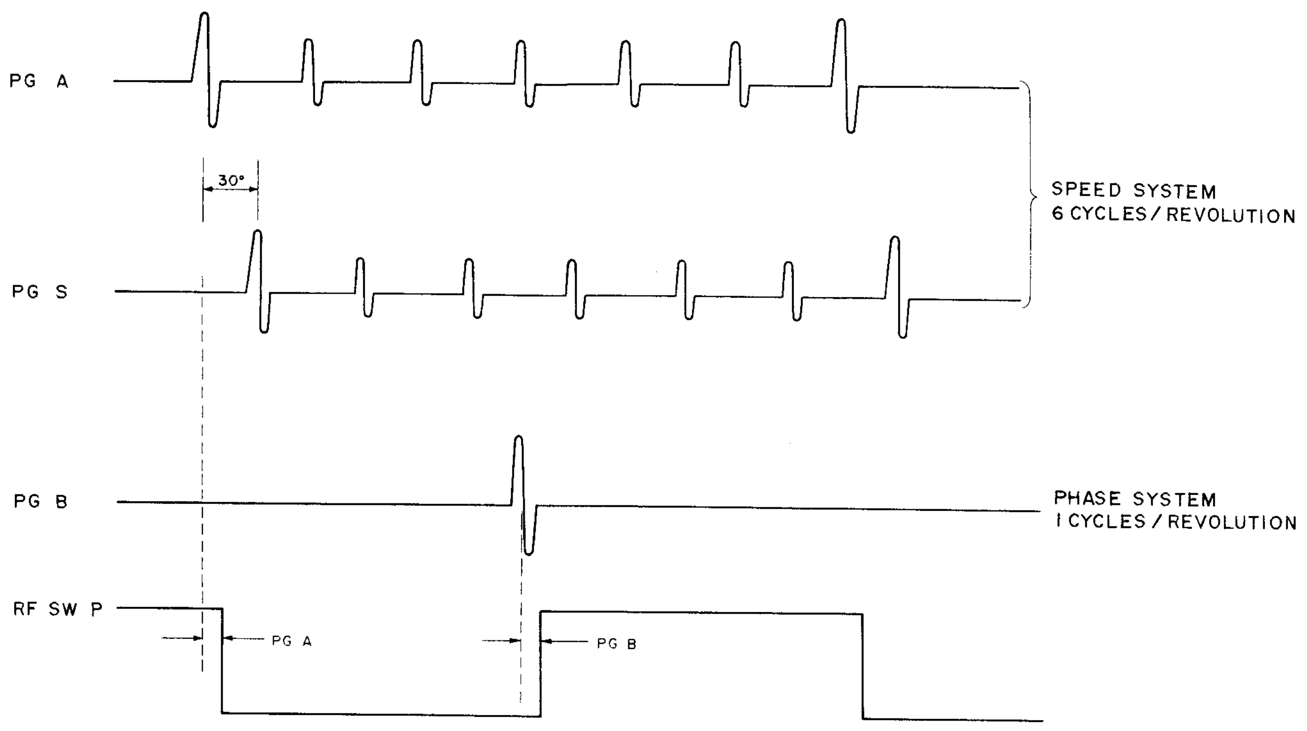
DRUM SPEED SYSTEM TIMING CHART


PG(A)
800mVp-p~1200mVp-p
PG(S)
PG A PULSE
PG S PULSE
300μsec
DELAY FOR SPEED
RAMP
4.3V
5V/572μsec
572 x 4
2288μsec
SPEED ERROR VOLTAGE
T
100μsec~130μsec
SPEED DELAY CR WAVEFORM
2.8V

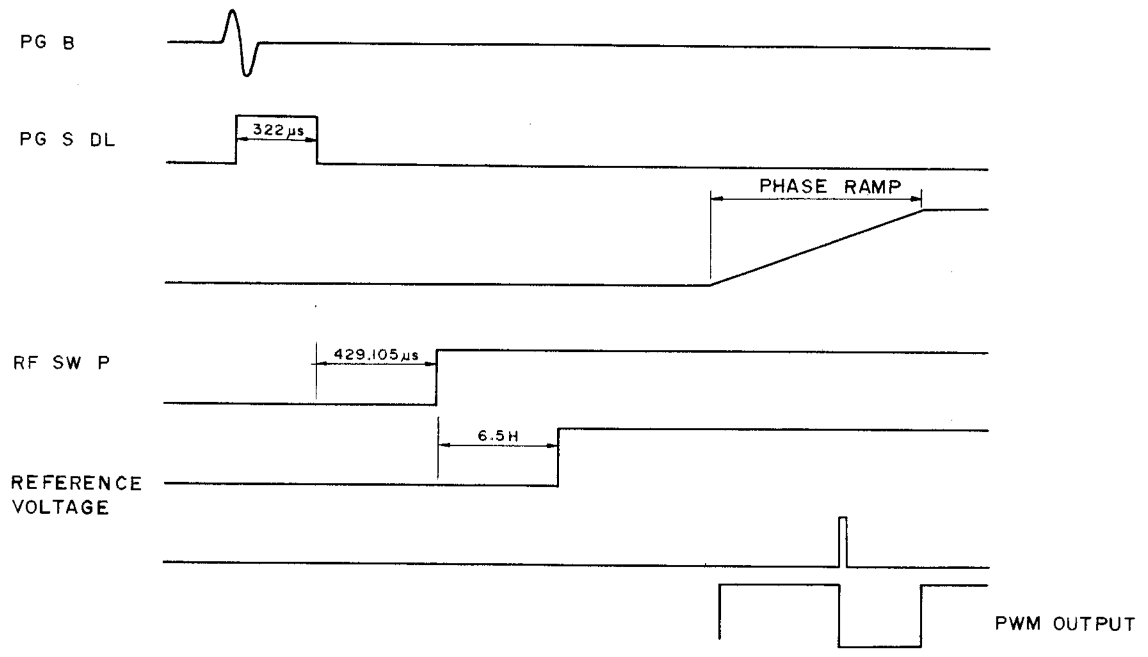
FG CIRCUIT TIMING CHART


90°
80mVp-p
FG A IN
2.5VDC
FG B IN (FG A−90°)
2.5VDC
IC306 ①
FG A OUT
(TP315)
IC306 ⑤
FG B OUT
(TP316)
FWD
IC307 ⑩
IC307 ⑪
IC301 ⑰
FG A
IC301 ⑱
FG B
IC306 ①
FG A OUT
(TP315)
IC306 ⑤
FG 8 OUT
(TP316)
RVS
IC301 ⑰
FG A
IC301 ⑱
FG B

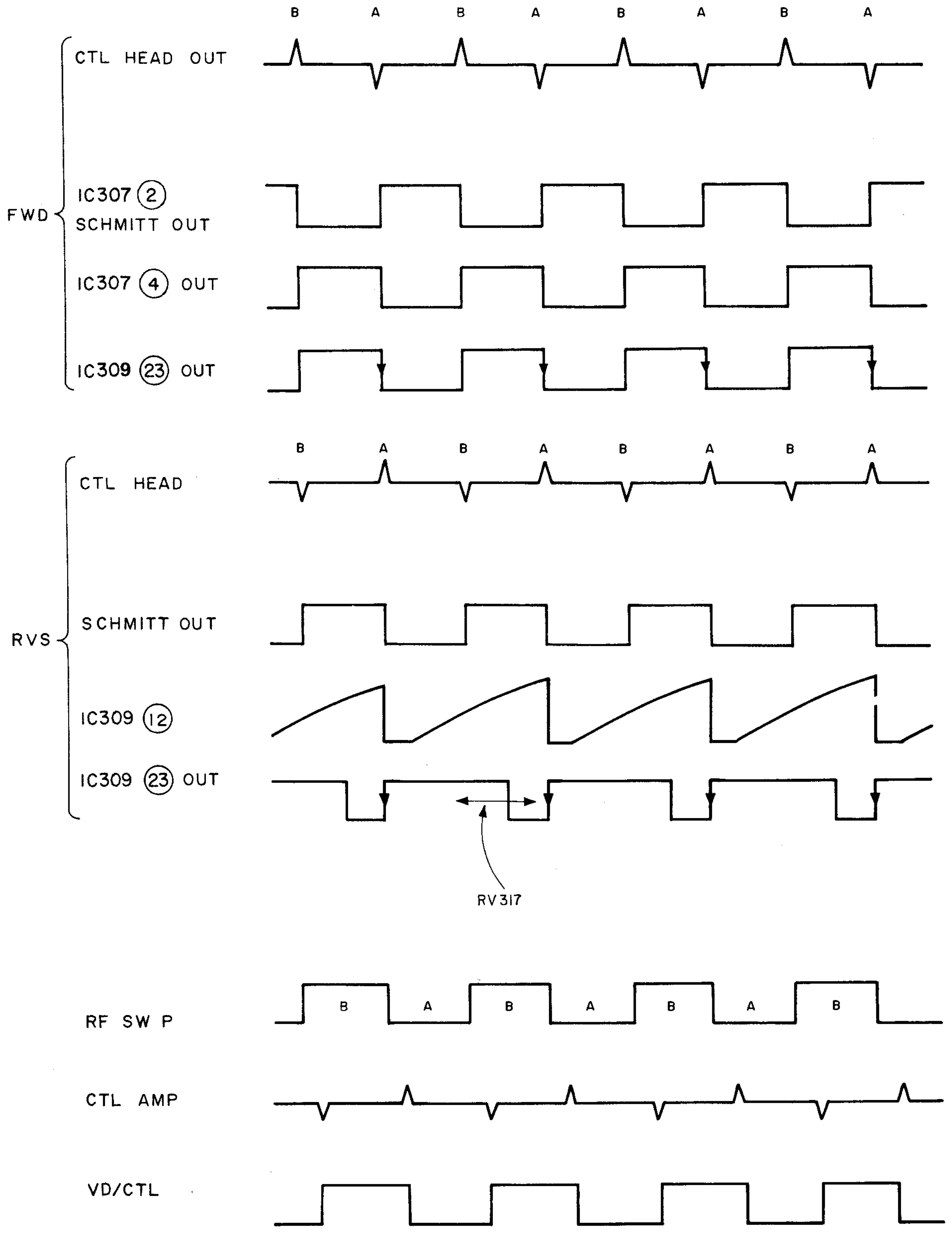
PG-A, PG-B, PG-S TIMING CHART


PG A
30°
SPEED SYSTEM
6 CYCLES / REVOLUTION
PG S
PG B
PHASE SYSTEM
1 CYCLES / REVOLUTION
RF SW P
PG A
PG B

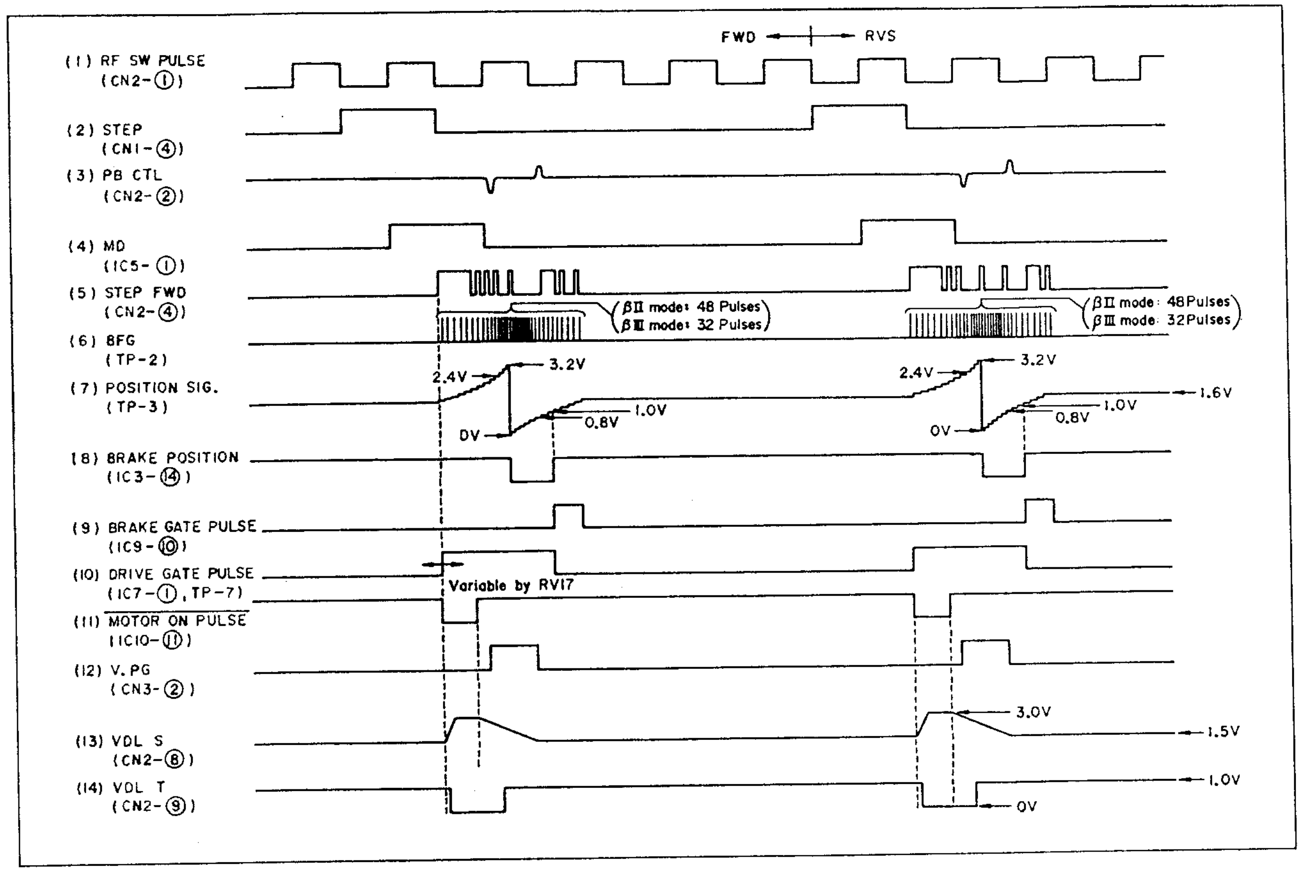
PG-A, PG-S TIMING CHART (REC/PB)


PG B
PG S DL
322μs
PHASE RAMP
RF SW P
429.105μs
6.5H
REFERENCE
VOLTAGE
PWM OUTPUT

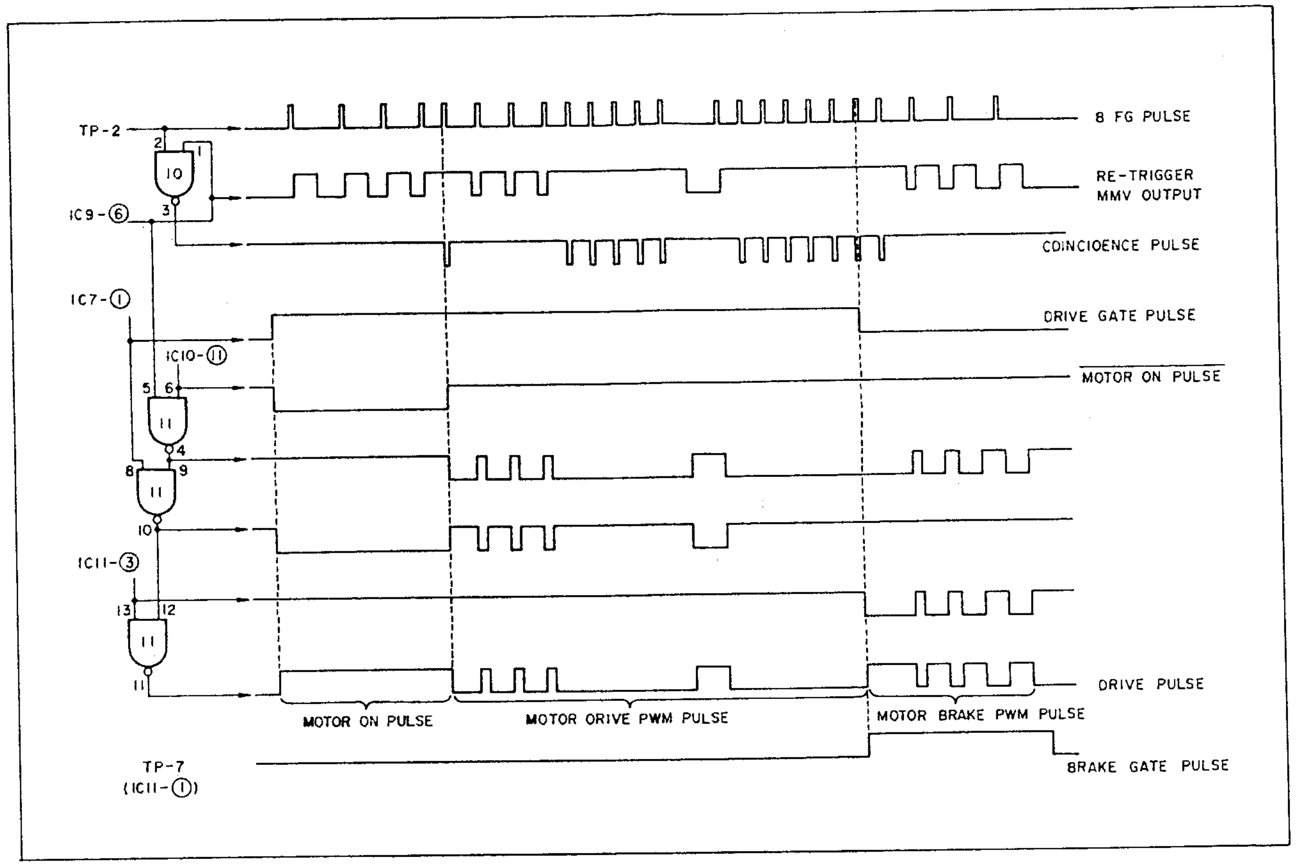
CTL CIRCUIT OF IC409 TIMING CHART


B A B A B A B A
CTL HEAD OUT
FWD
IC307 ②
SCHMITT OUT
IC307 ④ OUT
IC309 ㉓ OUT
B A B A B A B A
CTL HEAD
RVS
SCHMITT OUT
IC309 ⑫
IC309 ㉓ OUT
RV317
RF SW P
B A B A B A B
CTL AMP
VD/CTL

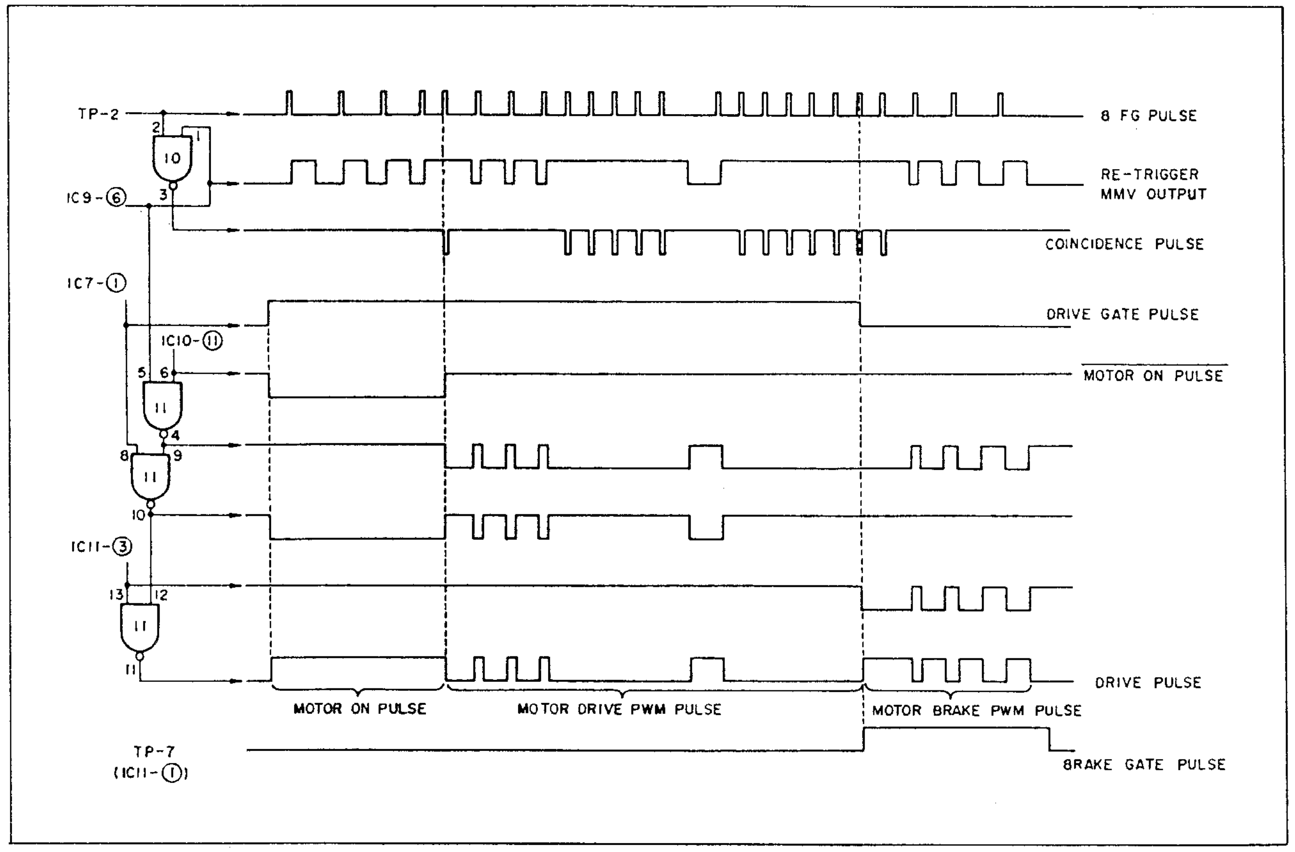
SWING SEARCH SERVO TIMING CHART (1)


FWD ←|→ RVS
(1) RF SW PULSE (CN2-①)
(2) STEP (CN1-④)
(3) PB CTL (CN2-②)
(4) MD (IC5-①)
(5) STEP FWD (CN2-④)
(6) 8FG (TP-2)
(βII mode: 48 Pulses / βIII mode: 32 Pulses)
(βII mode: 48Pulses / βIII mode: 32Pulses)
(7) POSITION SIG. (TP-3)
2.4V
3.2V
0V
0.8V
1.0V
1.6V
(8) BRAKE POSITION (IC3-⑭)
(9) BRAKE GATE PULSE (IC9-⑩)
(10) DRIVE GATE PULSE (IC7-①, TP-7)
Variable by RV17
(11) MOTOR ON PULSE (IC10-⑪)
(12) V.PG (CN3-②)
(13) VDL S (CN2-⑧)
3.0V
1.5V
(14) VDL T (CN2-⑨)
1.0V
0V

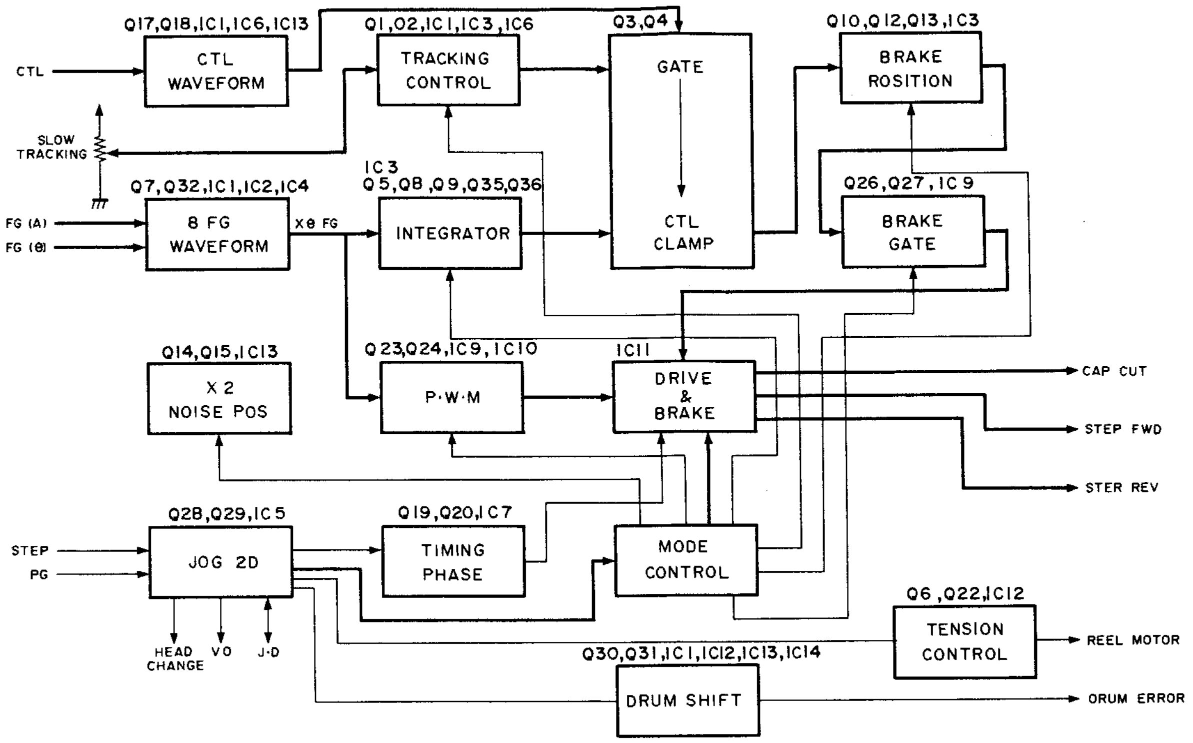
SWING SEARCH SERVO TIMING CHART (2)


TP-2
IC9-⑥
IC7-①
IC10-⑪
IC11-③
TP-7 (IC11-①)
10
11
1
2
3
4
5
6
8
9
10
11
12
13
8 FG PULSE
RE-TRIGGER MMV OUTPUT
COINCIDENCE PULSE
DRIVE GATE PULSE
MOTOR ON PULSE
DRIVE PULSE
MOTOR ON PULSE
MOTOR DRIVE PWM PULSE
MOTOR BRAKE PWM PULSE
BRAKE GATE PULSE

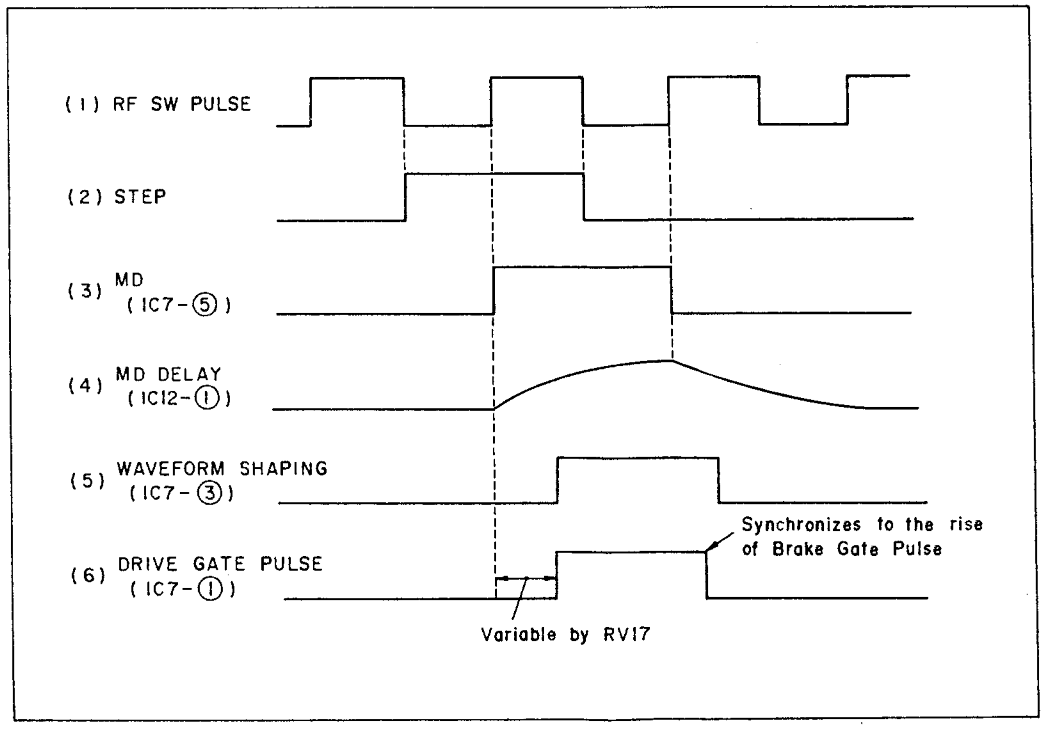
SWING SEARCH SERVO TIMING CHART (2)


TP-2
2
1
10
3
IC9-⑥
IC7-①
IC10-⑪
5
6
11
4
8
9
11
10
IC11-③
13
12
11
11
8 FG PULSE
RE-TRIGGER MMV OUTPUT
COINCIDENCE PULSE
DRIVE GATE PULSE
MOTOR ON PULSE
DRIVE PULSE
MOTOR ON PULSE
MOTOR DRIVE PWM PULSE
MOTOR BRAKE PWM PULSE
TP-7 (IC11-①)
BRAKE GATE PULSE

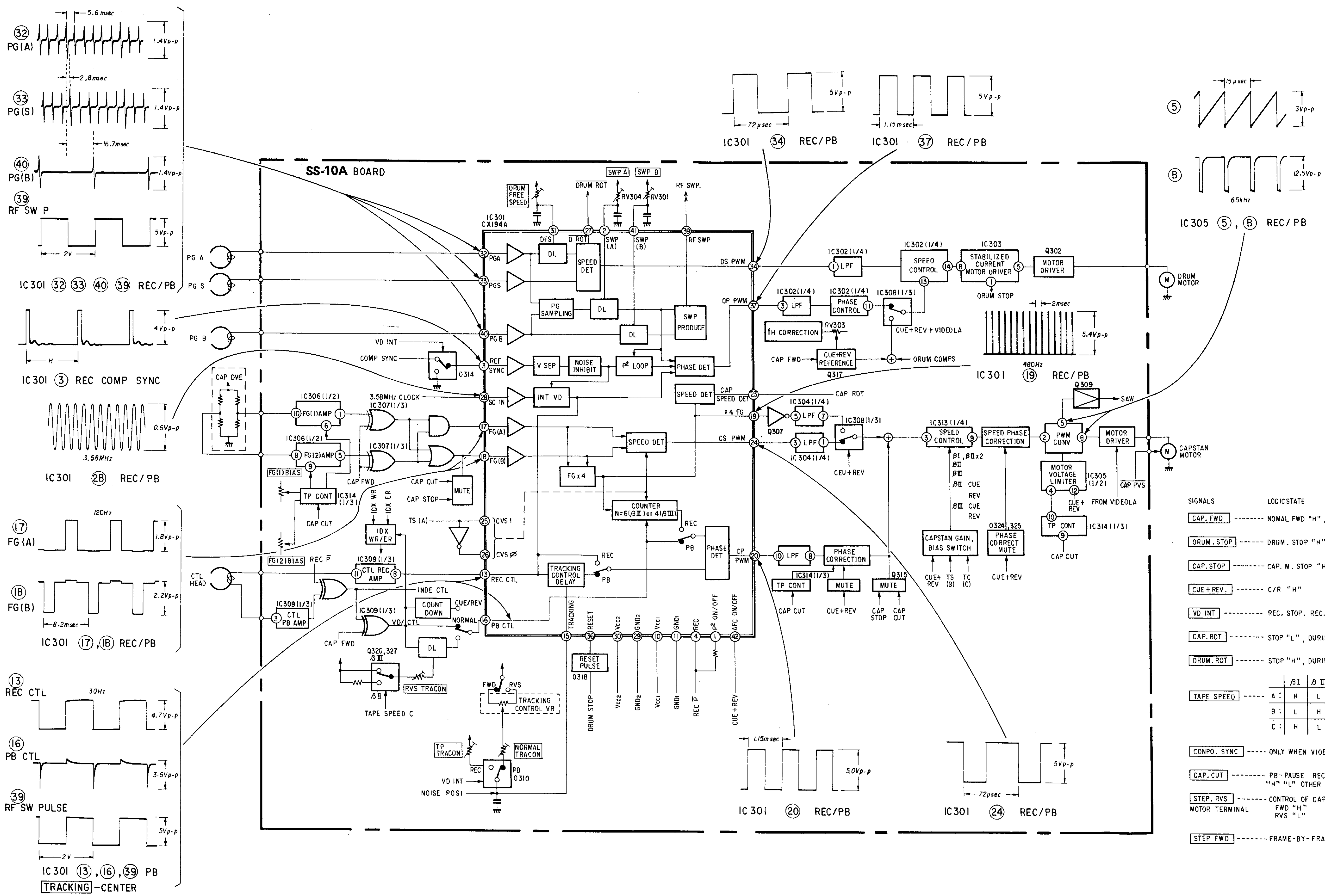
SWING SEARCH SERVO BLOCK DIAGRAM


CTL
Q17,Q18,IC1,IC6,IC13
CTL WAVEFORM
Q1,Q2,IC1,IC3,IC6
TRACKING CONTROL
Q3,Q4
GATE
CTL CLAMP
Q10,Q12,Q13,IC3
BRAKE ROSITION
SLOW TRACKING
Q7,Q32,IC1,IC2,IC4
FG (A)
FG (B)
8 FG WAVEFORM
X8 FG
IC3
Q5,Q8,Q9,Q35,Q36
INTEGRATOR
Q26,Q27,IC9
BRAKE GATE
Q14,Q15,IC13
X 2 NOISE POS
Q23,Q24,IC9,IC10
P·W·M
IC11
DRIVE & BRAKE
CAP CUT
STEP FWD
STER REV
STEP
PG
Q28,Q29,IC5
JOG 2D
Q19,Q20,IC7
TIMING PHASE
MODE CONTROL
Q6,Q22,IC12
TENSION CONTROL
REEL MOTOR
HEAD CHANGE
VO
J·D
Q30,Q31,IC1,IC12,IC13,IC14
DRUM SHIFT
ORUM ERROR

SWING SEARCH SERVO TIMING CHART (3)


(1) RF SW PULSE
(2) STEP
(3) MD (IC7-⑤)
(4) MD DELAY (IC12-①)
(5) WAVEFORM SHAPING (IC7-③)
(6) DRIVE GATE PULSE (IC7-①)
Synchronizes to the rise of Brake Gate Pulse
Variable by RV17

SERVO BLOCK DIAGRAM (DRUM/CAPSTAN)


SS-10A BOARD
IC301 CX194A
IC301 ㉜ ㉝ ㊵ ㊴ REC/PB
㉜ PG(A) 5.6msec 1.4Vp-p
㉝ PG(S) 2.8msec 1.4Vp-p
㊵ PG(B) 16.7msec 1.4Vp-p
㊴ RF SW P 2V 5Vp-p
IC301 ③ REC COMP SYNC 4Vp-p H
IC301 ㉘ REC/PB 3.58MHz 0.6Vp-p
IC301 ⑰, ⑱ REC/PB
⑰ FG(A) 120Hz 1.8Vp-p
⑱ FG(B) 8.2msec 2.2Vp-p
IC301 ⑬, ⑯, ㊴ PB TRACKING -CENTER
⑬ REC CTL 30Hz 4.7Vp-p
⑯ PB CTL 3.6Vp-p
㊴ RF SW PULSE 2V 5Vp-p
IC301 ㉞ REC/PB 72μsec 5Vp-p
IC301 ㊲ REC/PB 1.15msec 5Vp-p
IC305 ⑤, Ⓑ REC/PB 15μsec 3Vp-p 65kHz 12.5Vp-p
IC301 ⑲ REC/PB 2msec 480Hz 5.4Vp-p
IC301 ⑳ REC/PB 1.15msec 5.0Vp-p
IC301 ㉔ REC/PB 72μsec 5Vp-p
PG A
PG S
PG B
CTL HEAD
CAP DME
DRUM FREE SPEED
DRUM ROT
SWP A
SWP B
RV304
RV301
RF SWP
DFS
DL
D ROT
SPEED DET
SWP (A)
SWP (B)
RF SWP
PG SAMPLING
SWP PRODUCE
VD INT
COMP SYNC
Q314
REF SYNC
V SEP
NOISE INHIBIT
P² LOOP
PHASE DET
3.58MHz CLOCK
SC IN
INT VD
IC306(1/2) FG(1)AMP
IC306(1/2) FG(2)AMP
IC307(1/3)
FG(1)BIAS
FG(2)BIAS
TP CONT IC314 (1/3)
CAP CUT
CAP FWD
CAP STOP
MUTE
IDX WR
IDX ER
IDX WR/ER
TS (A)
CVS 1
CVS Ø
FG x 4
SPEED DET
COUNTER N=6(βⅡ)or 4(βⅢ)
REC
PB
PHASE DET
IC309(1/3) CTL REC AMP
IC309(1/3) CTL PB AMP
REC P
INDE CTL
COUNT DOWN
CUE/REV
NORMAL
VD/CTL
DL
TRACKING CONTROL DELAY
REC CTL
PB CTL
Q326,327 βⅢ
βⅡ
RVS TRACON
TAPE SPEED C
FWD RVS
TRACKING CONTROL VR
TP TRACON
NORMAL TRACON
Q310
NOISE POSI
RESET PULSE Q318
DRUM STOP
TRACKING
RESET
Vcc2
GND2
Vcc1
GND1
REC
P² ON/OFF
AFC ON/OFF
REC P
CUE+REV
DS PWM
DP PWM
CAP SPEED DET
x4 FG
CS PWM
CP PWM
IC302(1/4) LPF
IC302(1/4) SPEED CONTROL
IC303 STABILIZED CURRENT MOTOR DRIVER
Q302 MOTOR DRIVER
DRUM STOP
DRUM MOTOR
IC302(1/4) LPF
IC302(1/4) PHASE CONTROL
IC308(1/3)
fH CORRECTION
RV303
CUE+REV+VIDEOLA
CUE+REV REFERENCE Q317
DRUM COMPS
CAP FWD
CAP ROT
IC304(1/4) LPF
Q307
IC308(1/3)
IC304(1/4) LPF
CEU+REV
IC313(1/4) SPEED CONTROL
βⅠ, βⅢx2
βⅡ
βⅢ
βⅡ CUE REV
βⅢ CUE REV
SPEED PHASE CORRECTION
Q309
SAW
PWM CONV
MOTOR DRIVER
CAPSTAN MOTOR
MOTOR VOLTAGE LIMITER IC305 (1/2)
CUE+ REV
FROM VIDEOLA
CAP PVS
TP CONT IC314(1/3)
CAP CUT
CAPSTAN GAIN, BIAS SWITCH
CUE+ REV
TS (B)
TC (C)
Q324, 325 PHASE CORRECT MUTE
CUE+REV
LPF
PHASE CORRECTION
IC314(1/3) TP CONT
MUTE
Q315 MUTE
CAP CUT
CUE+REV
CAP STOP
CAP CUT

SIGNALS LOCICSTATE

CAP.FWD -------- NOMAL FWD "H", PVS "L"

DRUM.STOP ------ DRUM. STOP "H", DURING ROTATION "L"

CAP.STOP -------- CAP. M. STOP "H", DURING ROTATION "L"

CUE+REV. ------- C/R "H"

VD INT ---------- REC. STOP. REC.P "L", PB "H"

CAP.ROT -------- STOP "L", DURING ROTATION "H"

DRUM.ROT ------- STOP "H", DURING ROTATION "L"

TAPE SPEED -----

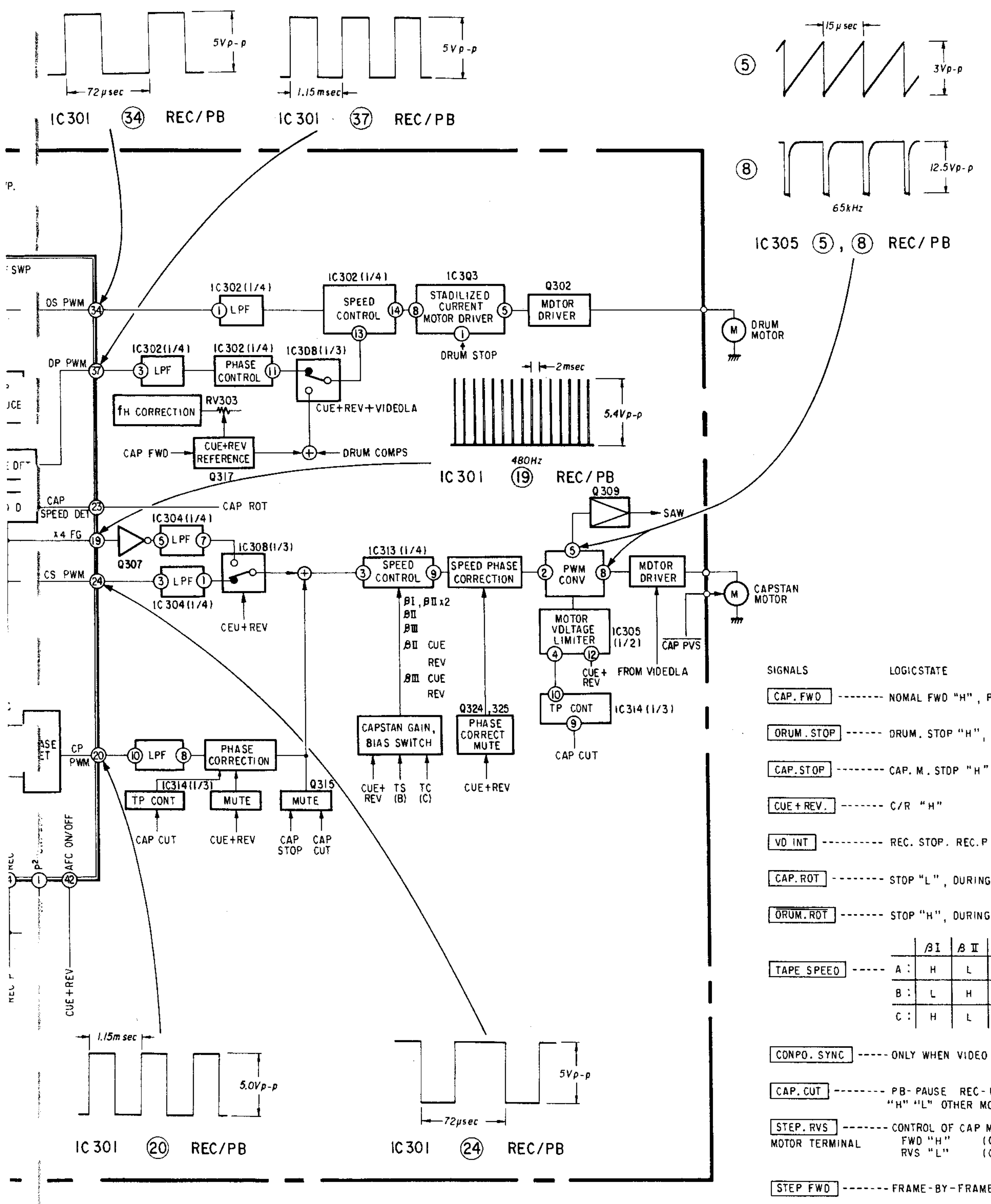
	βⅠ	βⅡ	βⅢ	βⅢx2
A :	H	L	L	L
B :	L	H	H	L
C :	H	L	H	L

CONPO. SYNC ----- ONLY WHEN VIDEO INPUT (V.H.SYNC)

CAP.CUT -------- PB-PAUSE REC-PAUSE SWING SEARCH
"H" "L" OTHER MODES "L"

STEP.RVS ------- CONTROL OF CAP MOTOR FWD AND RVS
MOTOR TERMINAL FWD "H" (CAP. SERVO "H")
RVS "L" (CAP. SERVO "H")

STEP FWD ------- FRAME-BY-FRAME "H"

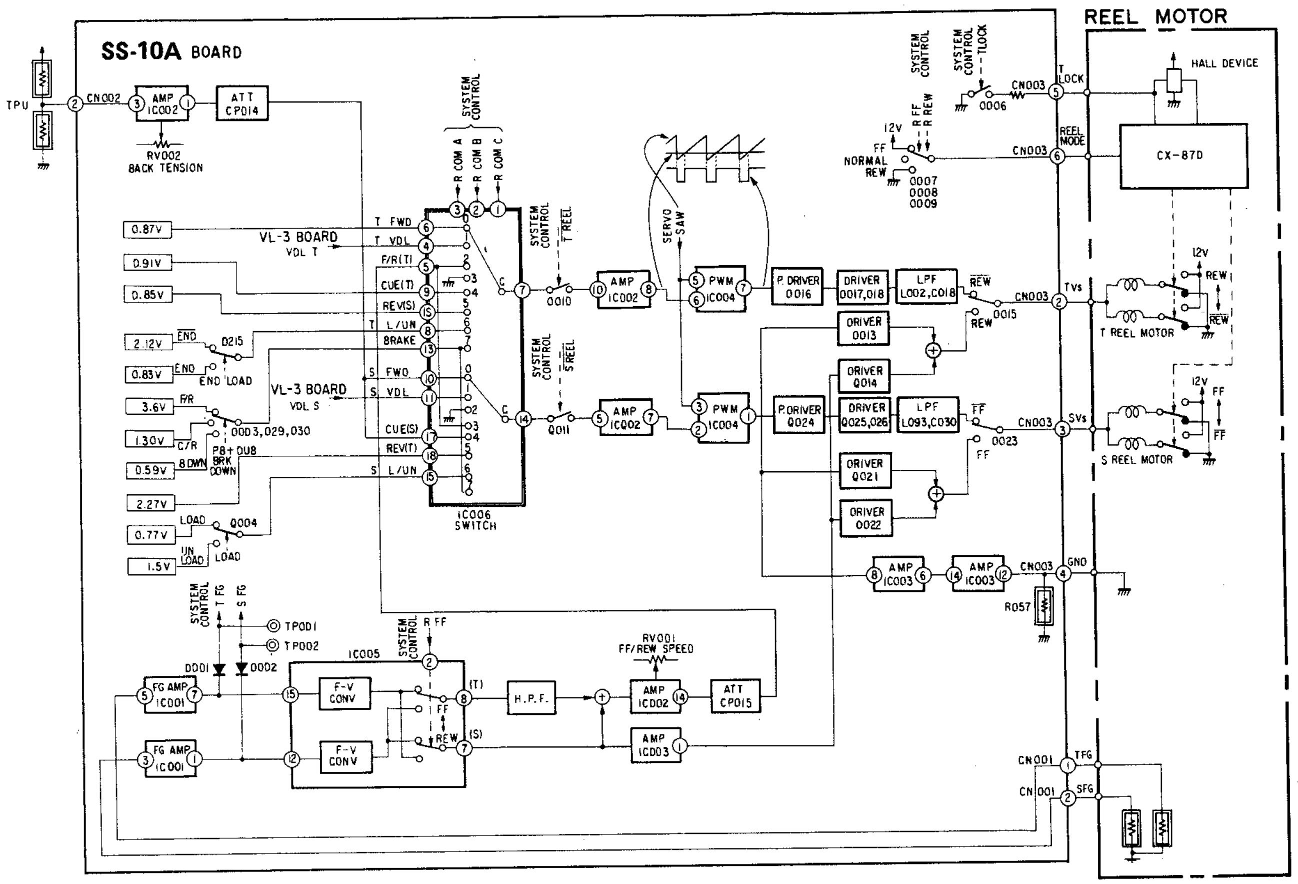

5Vp-p
72μsec
IC301 (34) REC/PB
5Vp-p
1.15msec
IC301 (37) REC/PB
⑤
15μsec
3Vp-p
⑧
12.5Vp-p
65kHz
IC305 ⑤, ⑧ REC/PB
SWP
DS PWM
DP PWM
IC302(1/4)
LPF
IC302(1/4)
SPEED CONTROL
IC303
STADILIZED CURRENT MOTOR DRIVER
Q302
MOTOR DRIVER
DRUM MOTOR
DRUM STOP
IC302(1/4)
LPF
IC302(1/4)
PHASE CONTROL
IC308(1/3)
fH CORRECTION
RV303
CUE+REV+VIDEOLA
CAP FWD
CUE+REV REFERENCE
Q317
DRUM COMPS
2msec
5.4Vp-p
480Hz
IC301 (19) REC/PB
CAP SPEED DET
CAP ROT
Q309
SAW
x4 FG
Q307
IC304(1/4)
LPF
IC308(1/3)
CS PWM
LPF
IC304(1/4)
CEU+REV
IC313 (1/4)
SPEED CONTROL
SPEED PHASE CORRECTION
PWM CONV
MOTOR DRIVER
CAPSTAN MOTOR
βI, βII x2
βII
βIII
βII CUE REV
βIII CUE REV
MOTOR VOLTAGE LIMITER
IC305 (1/2)
CUE+ REV
FROM VIDEOLA
CAP PVS
TP CONT
IC314(1/3)
CAP CUT
CAPSTAN GAIN, BIAS SWITCH
CUE+ REV
TS (B)
TC (C)
Q324, 325
PHASE CORRECT MUTE
CUE+REV
CP PWM
LPF
PHASE CORRECTION
IC314(1/3)
TP CONT
MUTE
Q315
MUTE
CAP CUT
CUE+REV
CAP STOP
CAP CUT
AFC ON/OFF
CUE+REV
1.15msec
5.0Vp-p
IC301 (20) REC/PB
5Vp-p
72μsec
IC301 (24) REC/PB

SIGNALS	LOGICSTATE
CAP. FWD	NOMAL FWD "H", PVS "L"
DRUM. STOP	DRUM. STOP "H", DURING ROTATION "L"
CAP. STOP	CAP. M. STOP "H", DURING ROTATION "L"
CUE + REV.	C/R "H"
VD INT	REC. STOP. REC.P "L", PB "H"
CAP. ROT	STOP "L", DURING ROTATION "H"
$\overline{\text{DRUM. ROT}}$	STOP "H", DURING ROTATION "L"
TAPE SPEED	see table below
CONPO. SYNC	ONLY WHEN VIDEO INPUT (V.H.SYNC)
CAP. CUT	PB-PAUSE REC-PAUSE SWING SEARCH "H" "L" OTHER MODES "L"
STEP. RVS MOTOR TERMINAL	CONTROL OF CAP MOTOR FWD AND RVS FWD "H" (CAP. SERVO "H") RVS "L" (CAP. SERVO "H")
STEP FWD	FRAME-BY-FRAME "H"

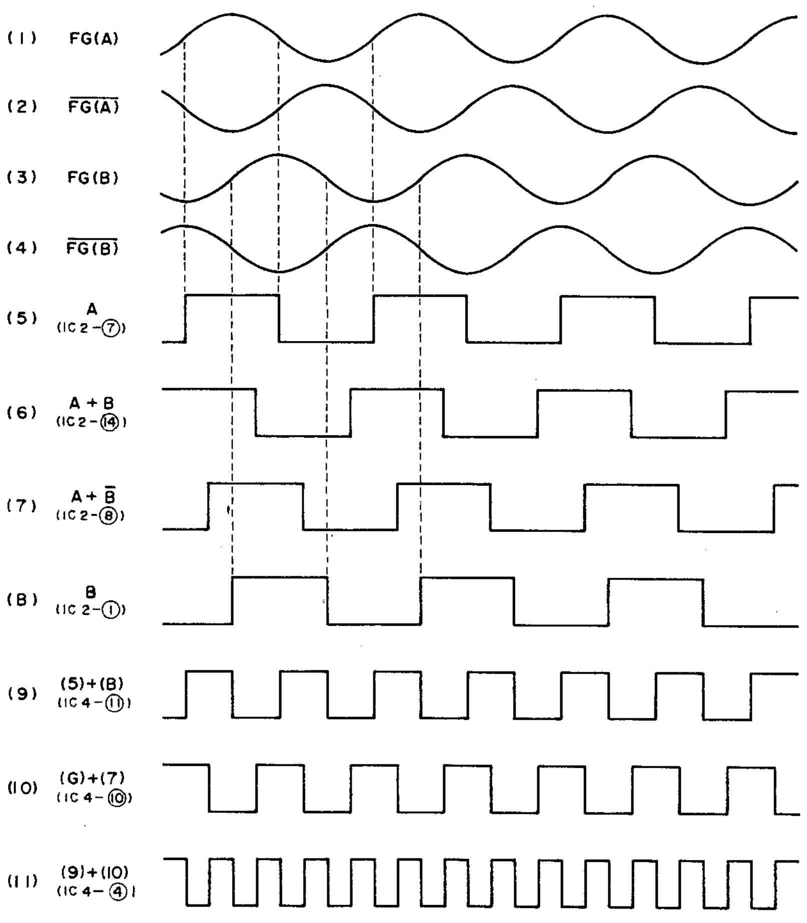
TAPE SPEED

	βI	βII	βIII	βIII x 2
A :	H	L	L	L
B :	L	H	H	L
C :	H	L	H	L

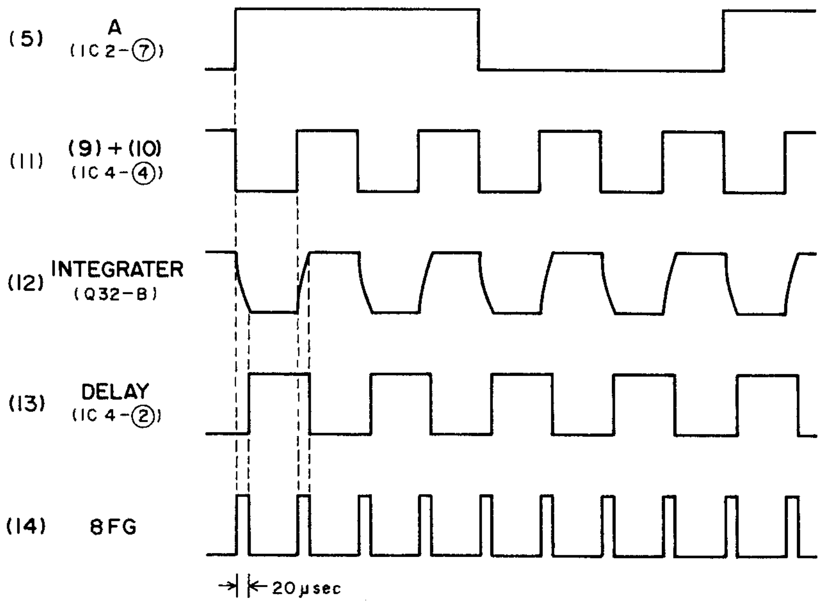
REEL SERVO BLOCK DIAGRAM


SS-10A BOARD
REEL MOTOR
TPU
CN002
AMP IC002
ATT CP014
RV002 BACK TENSION
SYSTEM CONTROL
R COM A
R COM B
R COM C
0.87V
0.91V
0.85V
2.12V
0.83V
3.6V
1.30V
0.59V
2.27V
0.77V
1.5V
VL-3 BOARD VOL T
VL-3 BOARD VOL S
T FWD
T VOL
F/R(T)
CUE(T)
REV(S)
T L/UN
BRAKE
S FWD
S VOL
CUE(S)
REV(T)
S L/UN
END
D215
END LOAD
F/R
C/R
BDWN
D003, 029, 030
PB+DUB
BRK DOWN
LOAD
Q004
UN LOAD
IC006 SWITCH
SYSTEM CONTROL T REEL
SYSTEM CONTROL S REEL
Q010
Q011
AMP IC002
SERVO SAW
PWM IC004
P. DRIVER Q016
DRIVER Q017, 018
LPF L002, C018
REW
Q015
DRIVER Q013
DRIVER Q014
P. DRIVER Q024
DRIVER Q025, 026
LPF L093, C030
FF
Q023
DRIVER Q021
DRIVER Q022
AMP IC003
R057
SYSTEM CONTROL
SYSTEM CONTROL T LOCK
Q006
CN003
T LOCK
12V
R FF
R REW
FF
NORMAL
REW
Q007
Q008
Q009
REEL MODE
HALL DEVICE
CX-87D
TVs
T REEL MOTOR
SVs
S REEL MOTOR
GND
SYSTEM CONTROL T FG S FG
TP001
TP002
D001
D002
FG AMP IC001
IC005
SYSTEM CONTROL R FF
F-V CONV
(T)
(S)
H.P.F.
RV001 FF/REW SPEED
AMP IC002
ATT CP015
AMP IC003
CN001
TFG
SFG

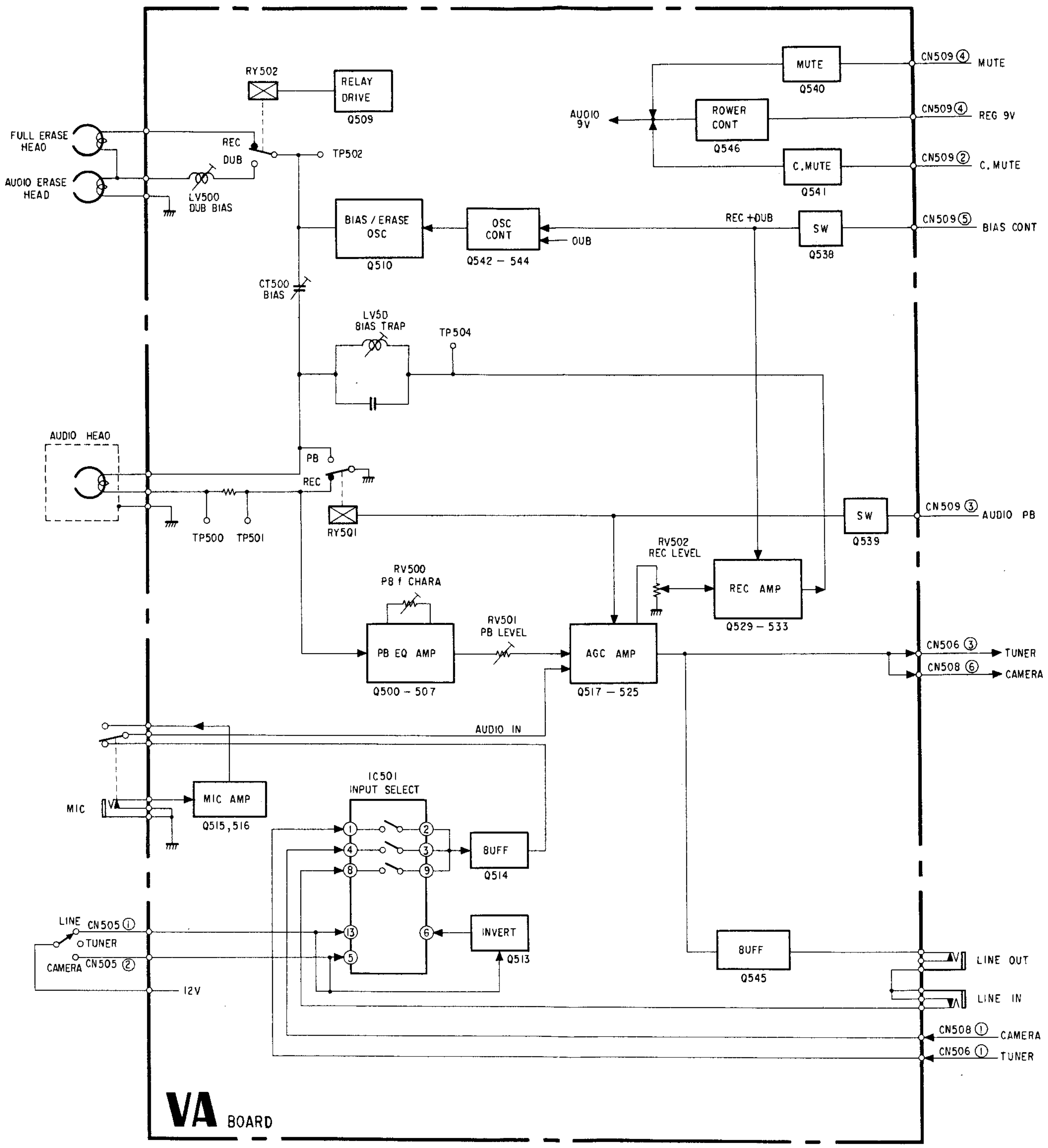
SFG SIGNAL GENERATOR TIMING CHART (1)



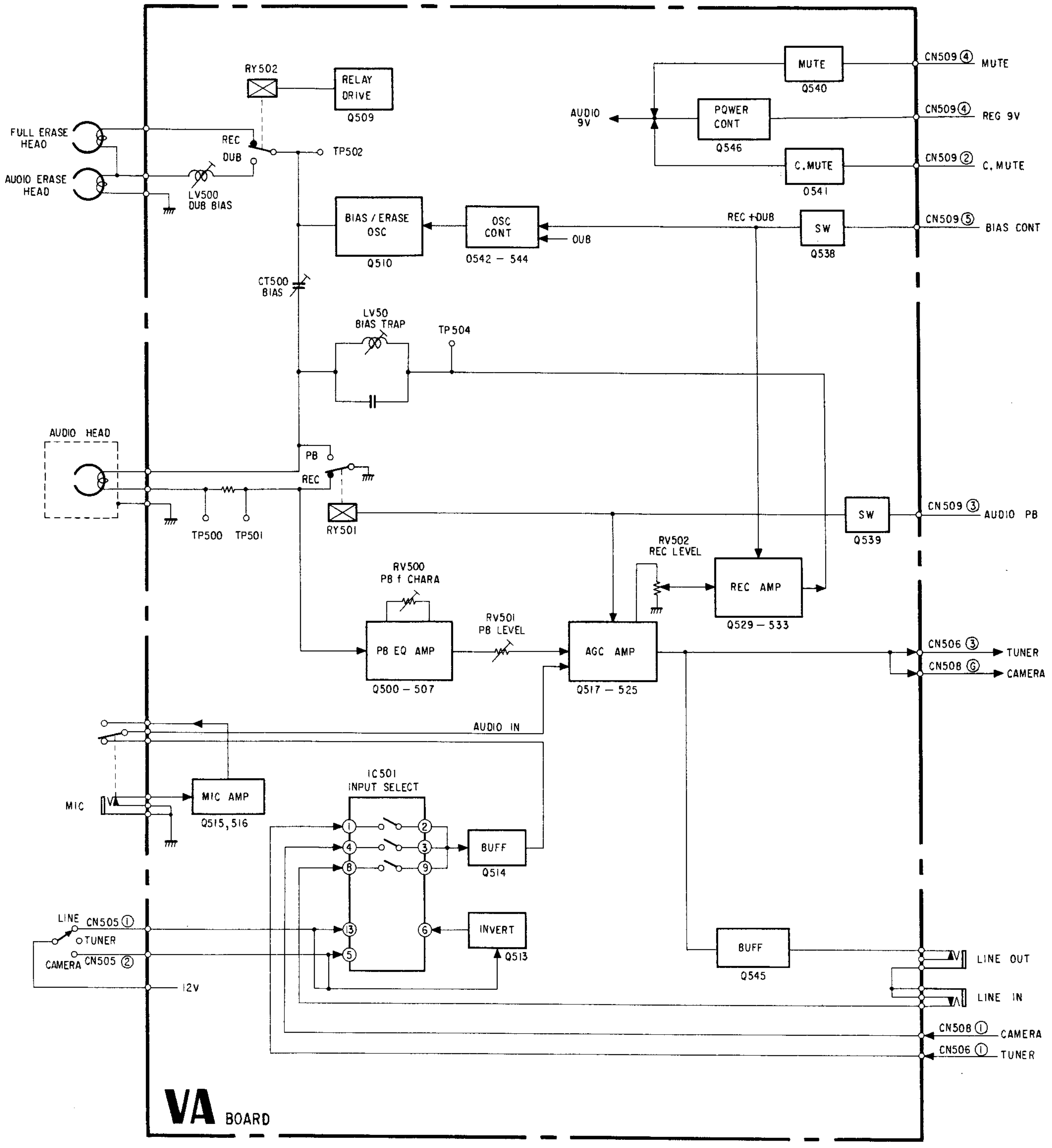
SFG SIGNAL GENERATOR TIMING CHART (2)



AUDIO BLOCK DIAGRAM

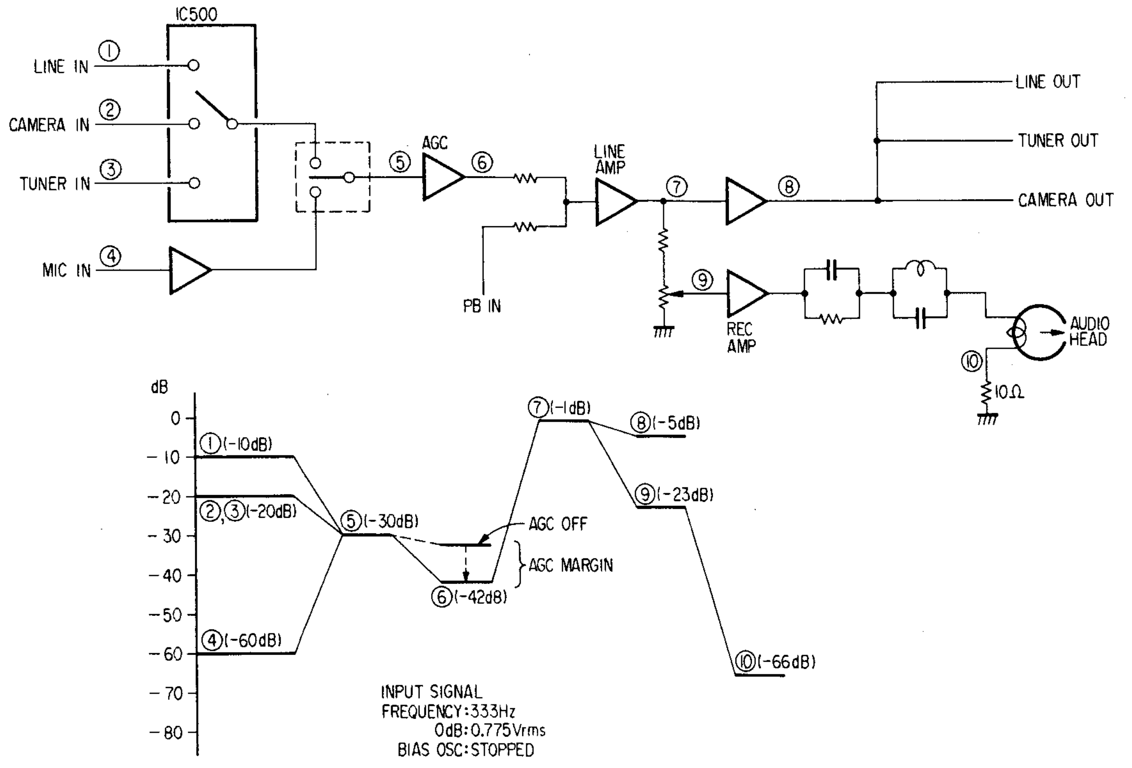

RY502
RELAY DRIVE
Q509
FULL ERASE HEAO
AUOIO ERASE HEAD
REC
DUB
TP502
LV500 DUB BIAS
BIAS / ERASE OSC
Q510
OSC CONT
Q542 – 544
DUB
CT500 BIAS
LV5D BIAS TRAP
TP504
MUTE
Q540
ROWER CONT
Q546
C.MUTE
Q541
AUDIO 9V
REC +DUB
SW
Q538
CN509④ MUTE
CN509④ REG 9V
CN509② C.MUTE
CN509⑤ BIAS CONT
AUDIO HEAD
PB
REC
RY5Q1
TP500
TP501
SW
Q539
CN509③ AUDIO PB
RV500 PB f CHARA
PB EQ AMP
Q500 – 507
RV501 PB LEVEL
AGC AMP
Q517 – 525
RV502 REC LEVEL
REC AMP
Q529 – 533
CN506③ TUNER
CN508⑥ CAMERA
AUDIO IN
MIC
MIC AMP
Q515, 516
IC501 INPUT SELECT
BUFF
Q514
INVERT
Q513
LINE
CN505①
TUNER
CAMERA
CN505②
12V
BUFF
Q545
LINE OUT
LINE IN
CN508① CAMERA
CN506① TUNER
VA BOARD

AUDIO BLOCK DIAGRAM


FULL ERASE HEAD
AUDIO ERASE HEAD
RY502
RELAY DRIVE
Q509
REC
DUB
TP502
LV500 DUB BIAS
AUDIO 9V
POWER CONT
Q546
MUTE
Q540
C.MUTE
Q541
CN509④ MUTE
CN509④ REG 9V
CN509② C.MUTE
CN509⑤ BIAS CONT
BIAS / ERASE OSC
Q510
OSC CONT
Q542 – 544
DUB
REC+DUB
SW
Q538
CT500 BIAS
LV50 BIAS TRAP
TP504
AUDIO HEAD
PB
REC
RY501
TP500
TP501
SW
Q539
CN509③ AUDIO PB
RV500 PB f CHARA
PB EQ AMP
Q500 – 507
RV501 PB LEVEL
AGC AMP
Q517 – 525
RV502 REC LEVEL
REC AMP
Q529 – 533
CN506③ TUNER
CN508⑥ CAMERA
AUDIO IN
MIC
MIC AMP
Q515, 516
IC501 INPUT SELECT
①
②
④
③
⑧
⑨
⑤
⑥
BUFF
Q514
INVERT
Q513
LINE CN505①
TUNER
CAMERA CN505②
12V
BUFF
Q545
LINE OUT
LINE IN
CN508① CAMERA
CN506① TUNER
VA BOARD

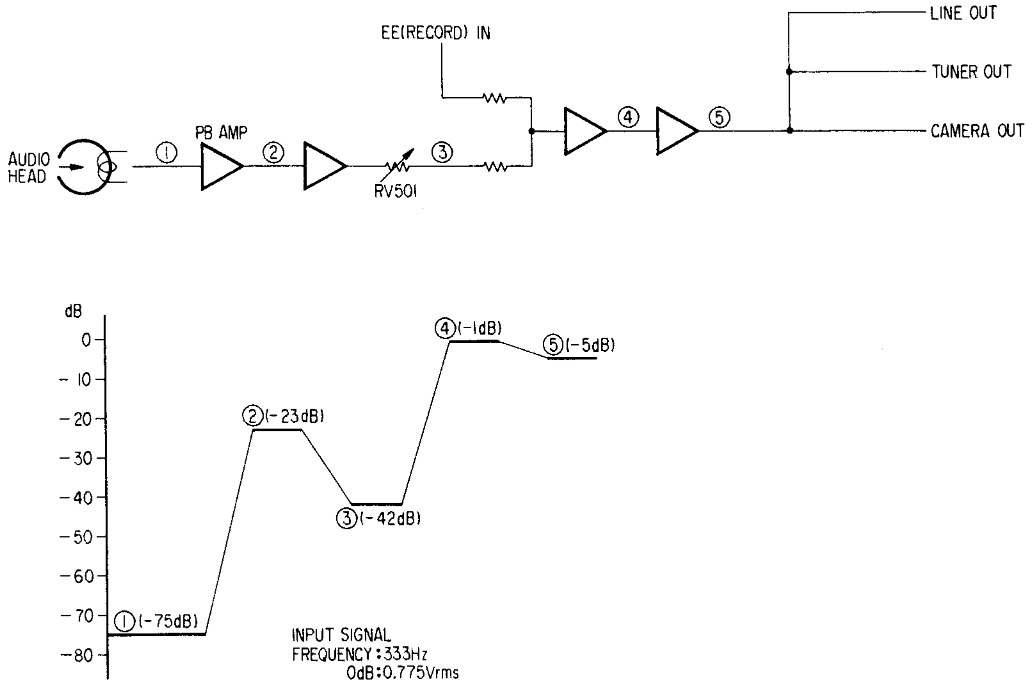
AUDIO LEVEL DIAGRAM

– REC MODE –


IC500
LINE IN ①
CAMERA IN ②
TUNER IN ③
MIC IN ④
⑤
AGC
⑥
LINE AMP
⑦
⑧
⑨
PB IN
REC AMP
LINE OUT
TUNER OUT
CAMERA OUT
AUDIO HEAD
⑩
10Ω
dB
0
– 10
– 20
– 30
– 40
– 50
– 60
– 70
– 80
①(-10dB)
②,③(-20dB)
④(-60dB)
⑤(-30dB)
⑥(-42dB)
AGC OFF
AGC MARGIN
⑦(-1dB)
⑧(-5dB)
⑨(-23dB)
⑩(-66dB)

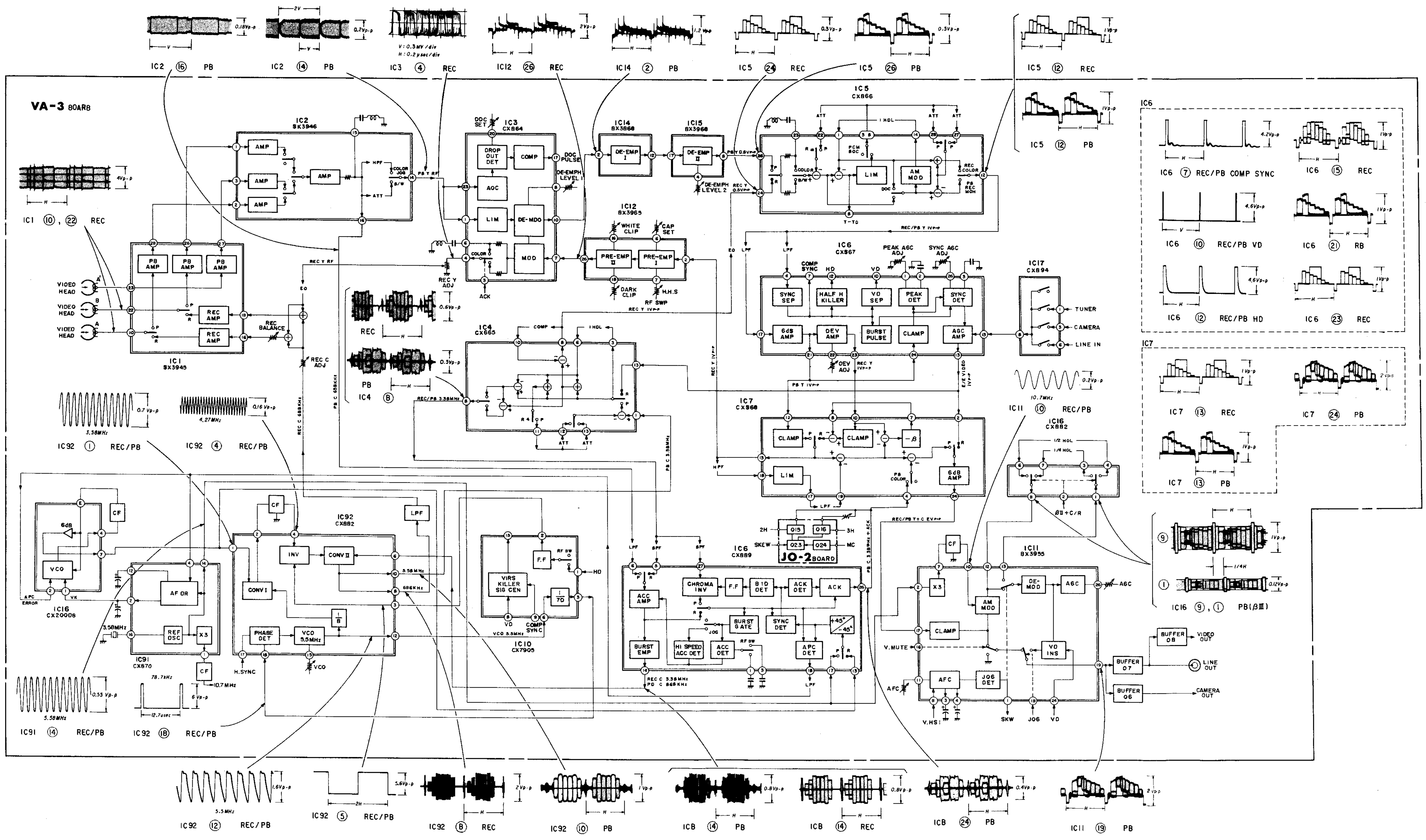
INPUT SIGNAL
FREQUENCY:333Hz
0dB:0.775Vrms
BIAS OSC:STOPPED

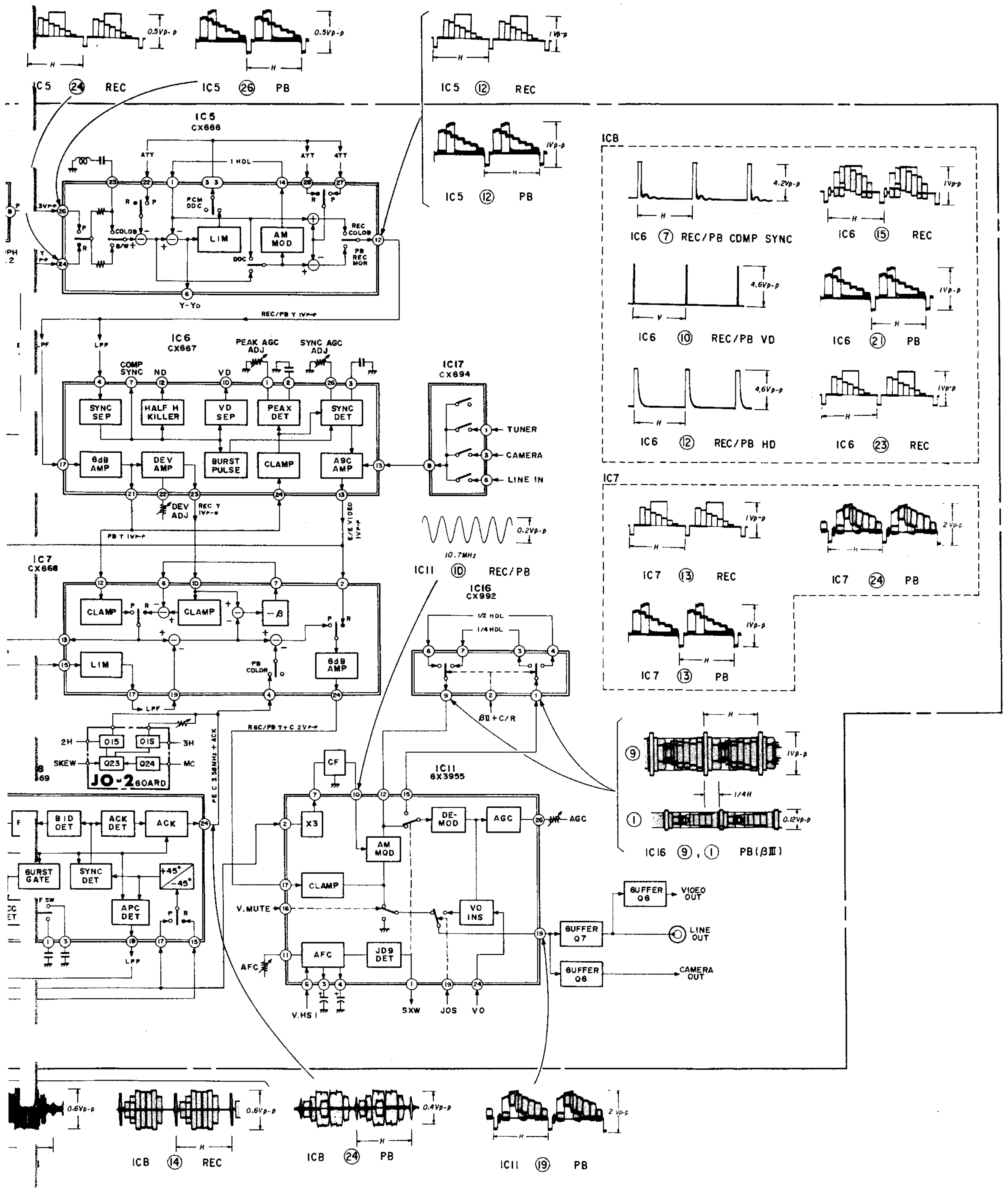
– PB MODE –


EE(RECORD) IN
AUDIO HEAD
①
PB AMP
②
③
RV501
④
⑤
LINE OUT
TUNER OUT
CAMERA OUT
dB
0
– 10
– 20
– 30
– 40
– 50
– 60
– 70
– 80
①(-75dB)
②(-23dB)
③(-42dB)
④(-1dB)
⑤(-5dB)

INPUT SIGNAL
FREQUENCY:333Hz
0dB:0.775Vrms

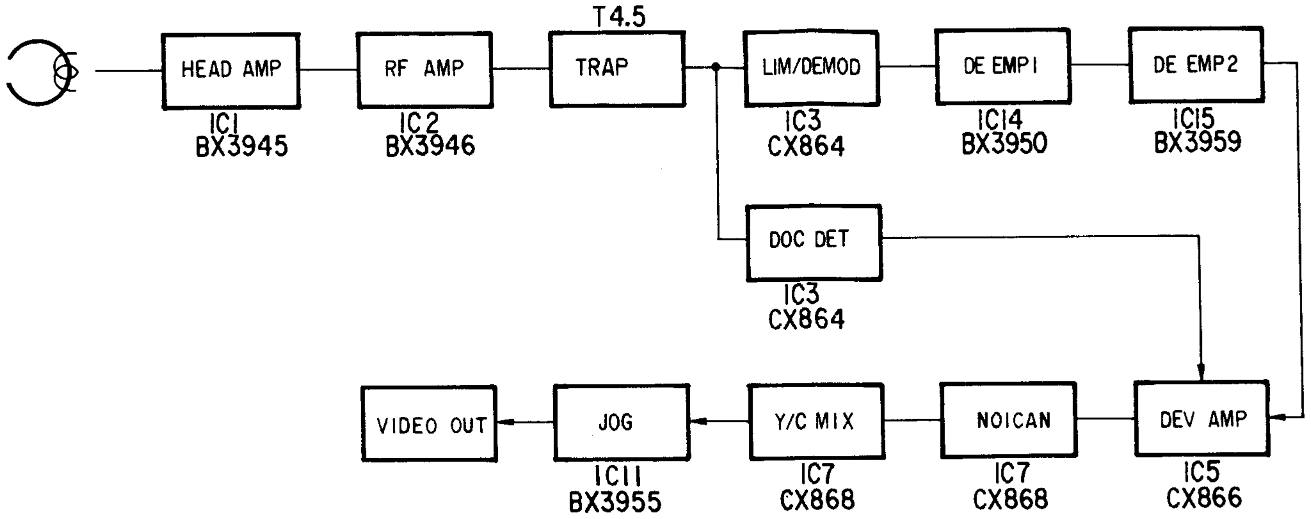
VIDEO BLOCK DIAGRAM


VA-3 BOARD
IC1 BX3945
IC2 BX3946
IC3 CX864
IC4 CX865
IC5 CX866
IC6 CX867
IC6 CX889
IC7 CX868
IC10 CX7905
IC11 BX3955
IC12 BX3965
IC14 BX3868
IC15 BX3968
IC16 CX20006
IC16 CX882
IC17 CX894
IC91 CX870
IC92 CX882
JO-2 BOARD
VIDEO HEAD
REC BALANCE
REC Y ADJ
REC C ADJ
DOC SET
DROP OUT DET
COMP
AGC
LIM
DE-MOD
MOD
DE-EMP I
DE-EMP II
DE-EMPH LEVEL 1
DE-EMPH LEVEL 2
PRE-EMP I
PRE-EMP II
WHITE CLIP
DARK CLIP
CAP SET
RF SWP
PB AMP
REC AMP
AMP
PCM DOC
AM MOD
SYNC SEP
HALF H KILLER
VD SEP
PEAK DET
SYNC DET
6dB AMP
DEV AMP
BURST PULSE
CLAMP
AGC AMP
PEAK AGC ADJ
SYNC AGC ADJ
DEV ADJ
REC Y 1Vp-p ADJ
TUNER
CAMERA
LINE IN
VCO
AF OR
REF OSC
X3
CF
INV
CONV I
CONV II
PHASE DET
VCO 5.5MHz
LPF
VIRS KILLER SIG GEN
F.F
1/7D
ACC AMP
CHROMA INV
B.I.D DET
ACK DET
ACK
BURST GATE
SYNC DET
BURST EMP
HI SPEED ACC DET
ACC DET
APC DET
DE-MOD
AGC
AM MOD
VD INS
AFC
JOG DET
BUFFER Q8
BUFFER Q7
BUFFER Q6
VIDEO OUT
LINE OUT
CAMERA OUT
V.MUTE
SKW
VD
H.SYNC
IC2 ⑯ PB
IC2 ⑭ PB
IC3 ④ REC
IC12 ㉖ REC
IC14 ② PB
IC5 ㉔ REC
IC5 ㉖ PB
IC5 ⑫ REC
IC5 ⑫ PB
IC1 ⑩, ㉒ REC
IC4 ⑧ REC
IC4 ⑧ PB
IC6 ⑦ REC/PB COMP SYNC
IC6 ⑩ REC/PB VD
IC6 ⑫ REC/PB HD
IC6 ⑮ REC
IC6 ㉑ RB
IC6 ㉓ REC
IC7 ⑬ REC
IC7 ㉔ PB
IC7 ⑬ PB
IC11 ⑩ REC/PB
IC16 ⑨, ① PB(βIII)
IC92 ① REC/PB
IC92 ④ REC/PB
IC91 ⑭ REC/PB
IC92 ⑱ REC/PB
IC92 ⑫ REC/PB
IC92 ⑤ REC/PB
IC92 ⑧ REC
IC92 ⑩ PB
IC8 ⑭ PB
IC8 ⑭ REC
IC8 ㉔ PB
IC11 ⑲ PB

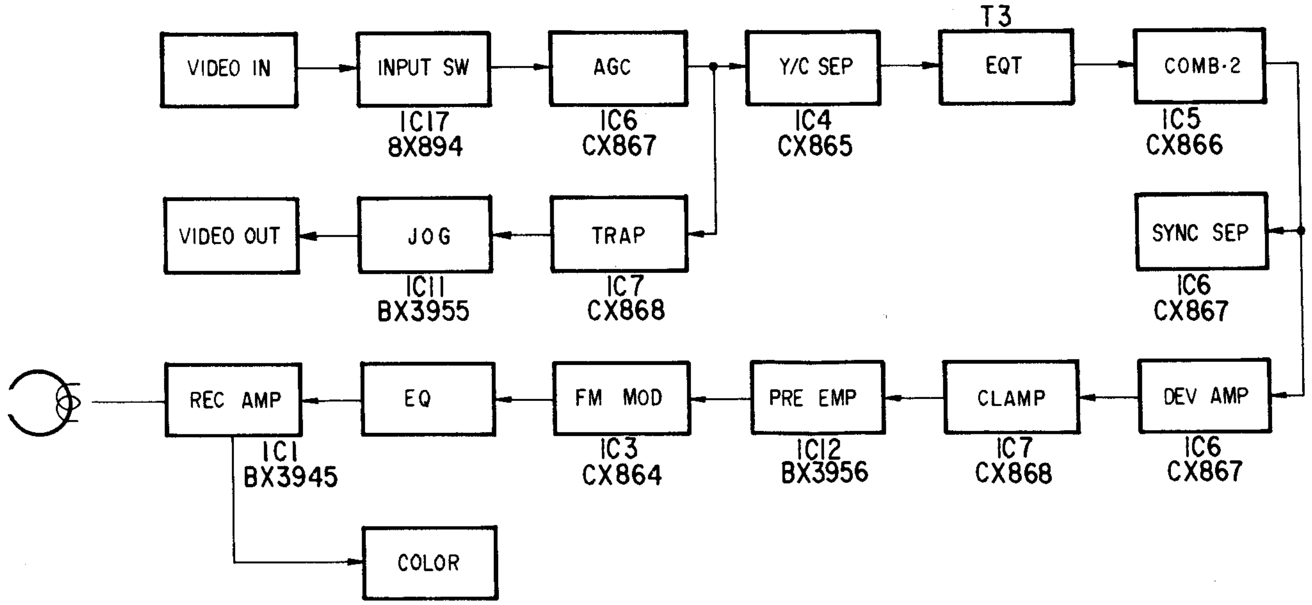

IC5 ㉔ REC
IC5 ㉖ PB
IC5 ⑫ REC
IC5 ⑫ PB
IC5
CX866
1 HDL
ATT
LIM
AM MOD
DOC
Y-Yo
REC/PB Y 1Vp-p
IC6
CX867
COMP SYNC
PEAK AGC ADJ
SYNC AGC ADJ
SYNC SEP
HALF H KILLER
VD SEP
PEAK DET
SYNC DET
6dB AMP
DEV AMP
BURST PULSE
CLAMP
AGC AMP
DEV ADJ
REC Y
PB Y 1Vp-p
IC17
CX894
TUNER
CAMERA
LINE IN
E/E VIDEO 1Vp-p
IC8
IC6 ⑦ REC/PB COMP SYNC
IC6 ⑮ REC
IC6 ⑩ REC/PB VD
IC6 ㉑ PB
IC6 ⑫ REC/PB HD
IC6 ㉓ REC
IC7
IC7 ⑬ REC
IC7 ㉔ PB
IC7 ⑬ PB
IC11 ⑩ REC/PB
10.7MHz
IC7
CX868
CLAMP
LIM
6dB AMP
PB COLOR
LPF
REC/PB Y+C 2Vp-p
IC16
CX992
1/2 HDL
1/4HDL
BII+C/R
IC16 ⑨, ① PB(βIII)
1/4H
2H
SKEW
3H
MC
JO-2 BOARD
BID DET
ACK DET
ACK
BURST GATE
SYNC DET
APC DET
+45°
-45°
FP SW
LPF
CF
IC11
BX3955
X3
AM MOD
DE-MOD
AGC
CLAMP
V.MUTE
AFC
JD9 DET
VO INS
BUFFER Q6
VIDEO OUT
BUFFER Q7
LINE OUT
BUFFER Q6
CAMERA OUT
V.HS I
SXW
JOS
VO
IC8 ⑭ REC
IC8 ㉔ PB
IC11 ⑲ PB

VIDEO Y BLOCK DIAGRAM

PB Y

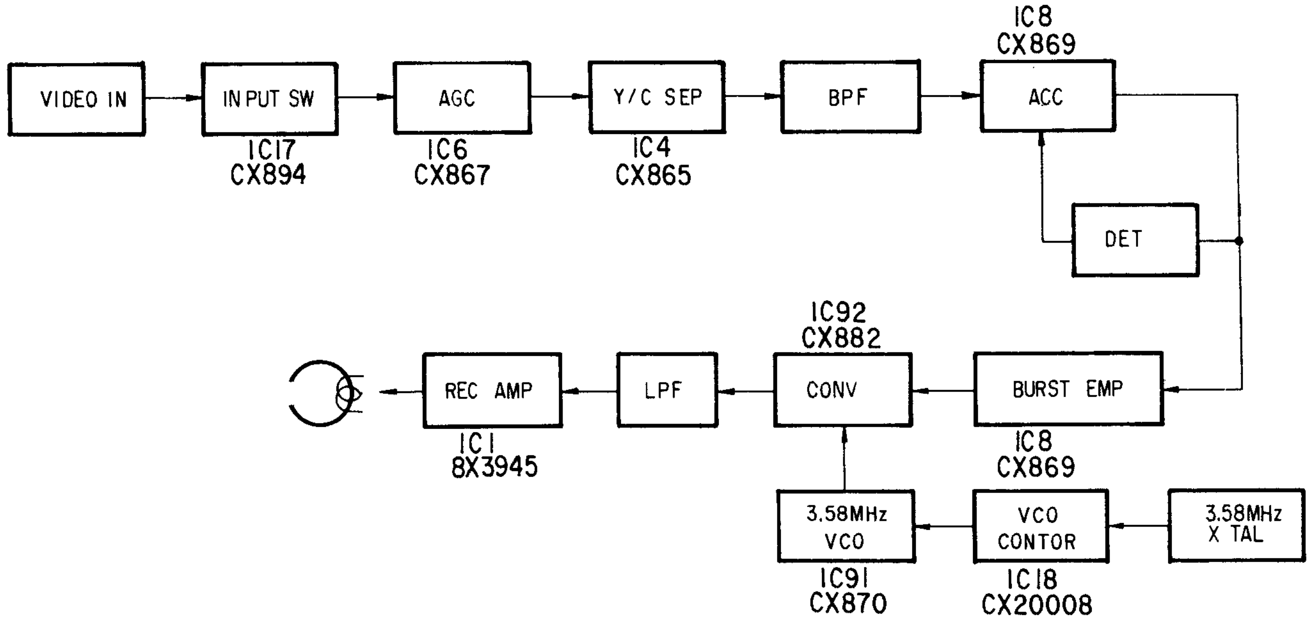

HEAD AMP
IC1
BX3945
RF AMP
IC2
BX3946
T4.5
TRAP
LIM/DEMOD
IC3
CX864
DE EMP1
IC14
BX3950
DE EMP2
IC15
BX3959
DOC DET
IC3
CX864
DEV AMP
IC5
CX866
NOICAN
IC7
CX868
Y/C MIX
IC7
CX868
JOG
IC11
BX3955
VIDEO OUT

REC Y

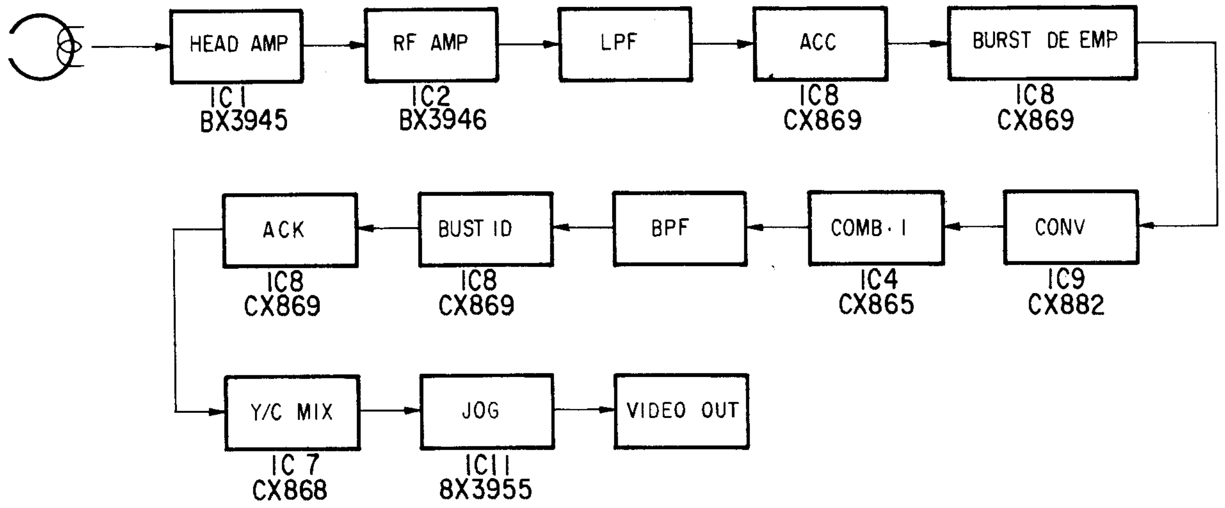

VIDEO IN
INPUT SW
IC17
8X894
AGC
IC6
CX867
Y/C SEP
IC4
CX865
T3
EQT
COMB-2
IC5
CX866
SYNC SEP
IC6
CX867
TRAP
IC7
CX868
JOG
IC11
BX3955
VIDEO OUT
DEV AMP
IC6
CX867
CLAMP
IC7
CX868
PRE EMP
IC12
BX3956
FM MOD
IC3
CX864
EQ
REC AMP
IC1
BX3945
COLOR

VIDEO CHROMA BLOCK DIAGRAM

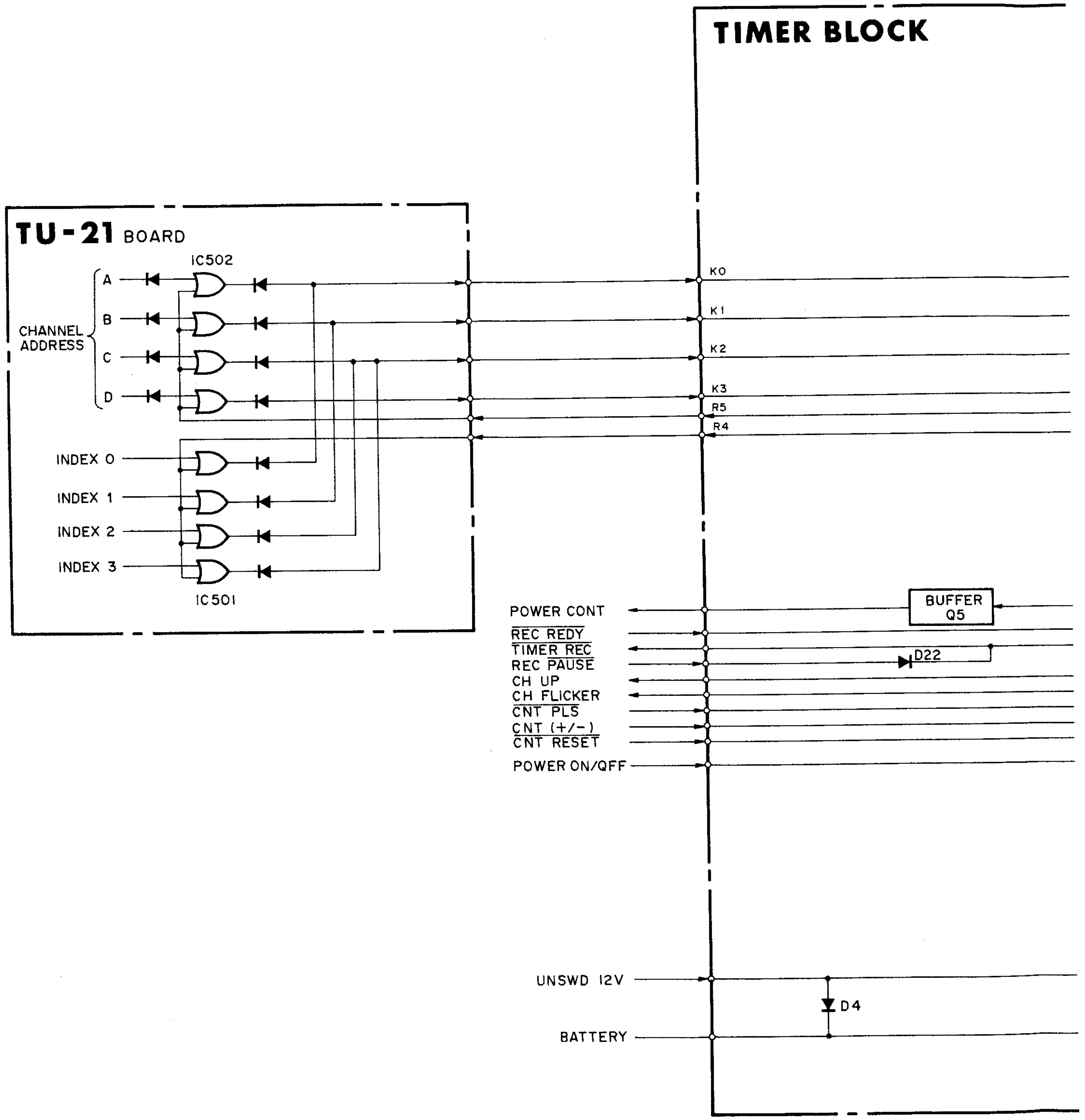
REC CHROMA


VIDEO IN
INPUT SW
IC17
CX894
AGC
IC6
CX867
Y/C SEP
IC4
CX865
BPF
IC8
CX869
ACC
DET
REC AMP
IC1
8X3945
LPF
IC92
CX882
CONV
BURST EMP
IC8
CX869
3.58MHz
VCO
IC91
CX870
VCO
CONTOR
IC18
CX20008
3.58MHz
X TAL

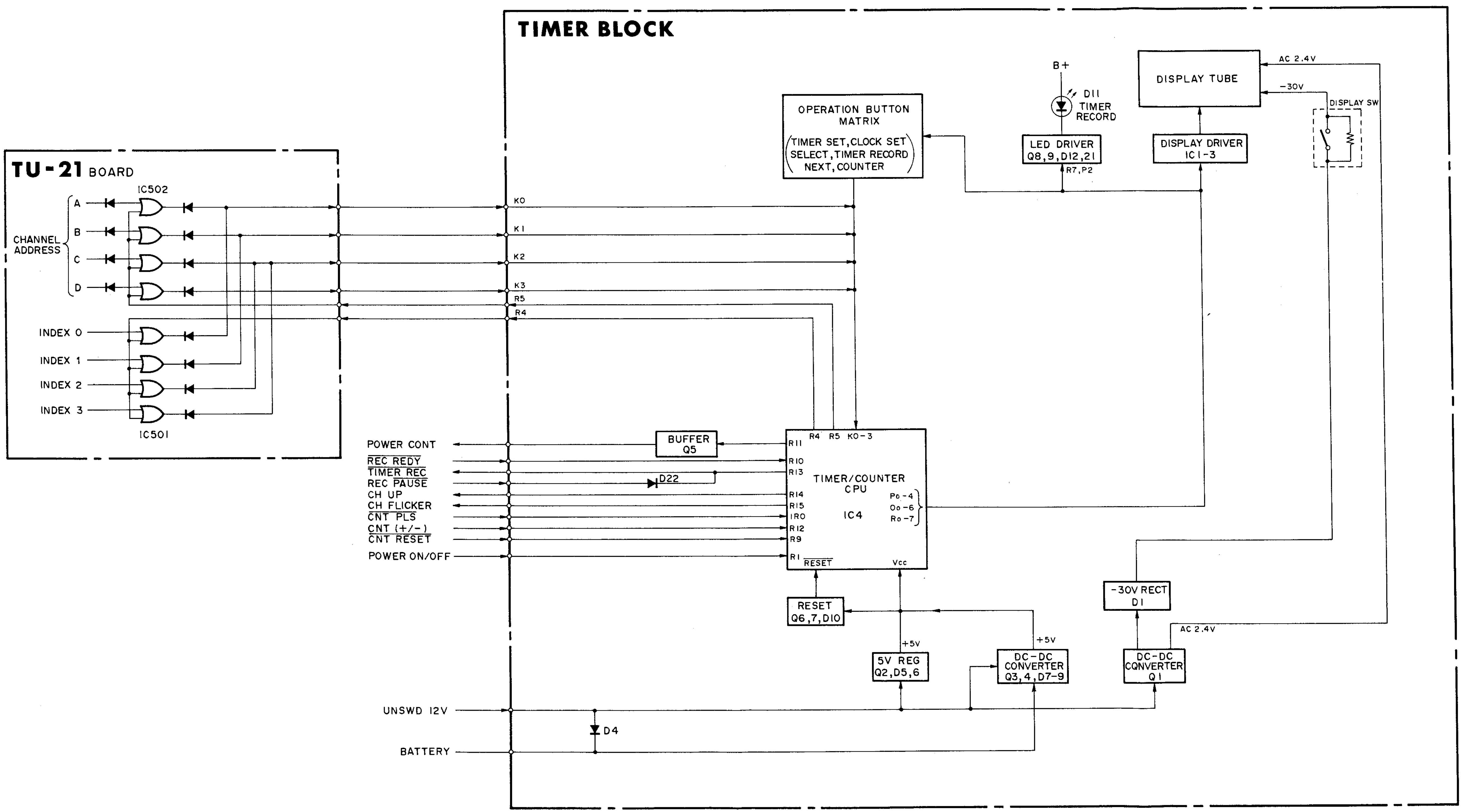
PB CHROMA


HEAD AMP
IC1
BX3945
RF AMP
IC2
BX3946
LPF
ACC
IC8
CX869
BURST DE EMP
IC8
CX869
ACK
IC8
CX869
BUST ID
IC8
CX869
BPF
COMB・I
IC4
CX865
CONV
IC9
CX882
Y/C MIX
IC 7
CX868
JOG
IC11
8X3955
VIDEO OUT

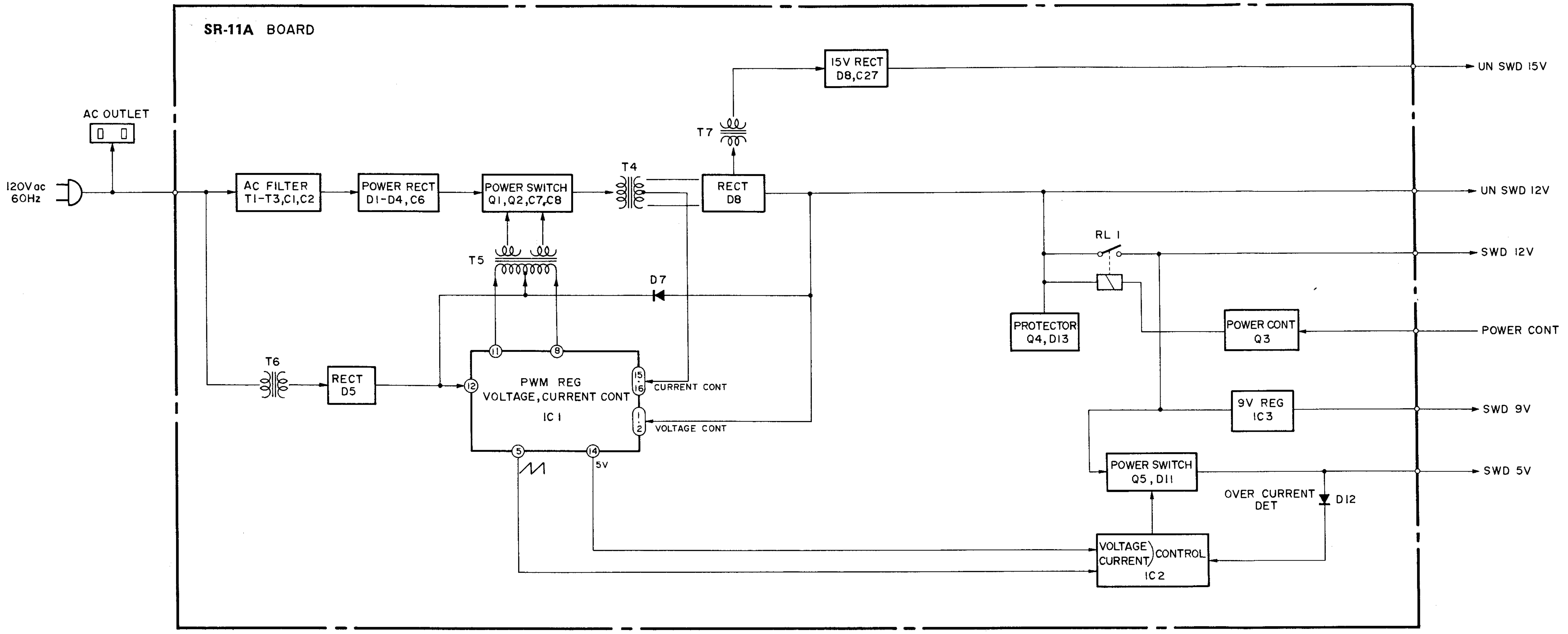
TIMER BLOCK DIAGRAM

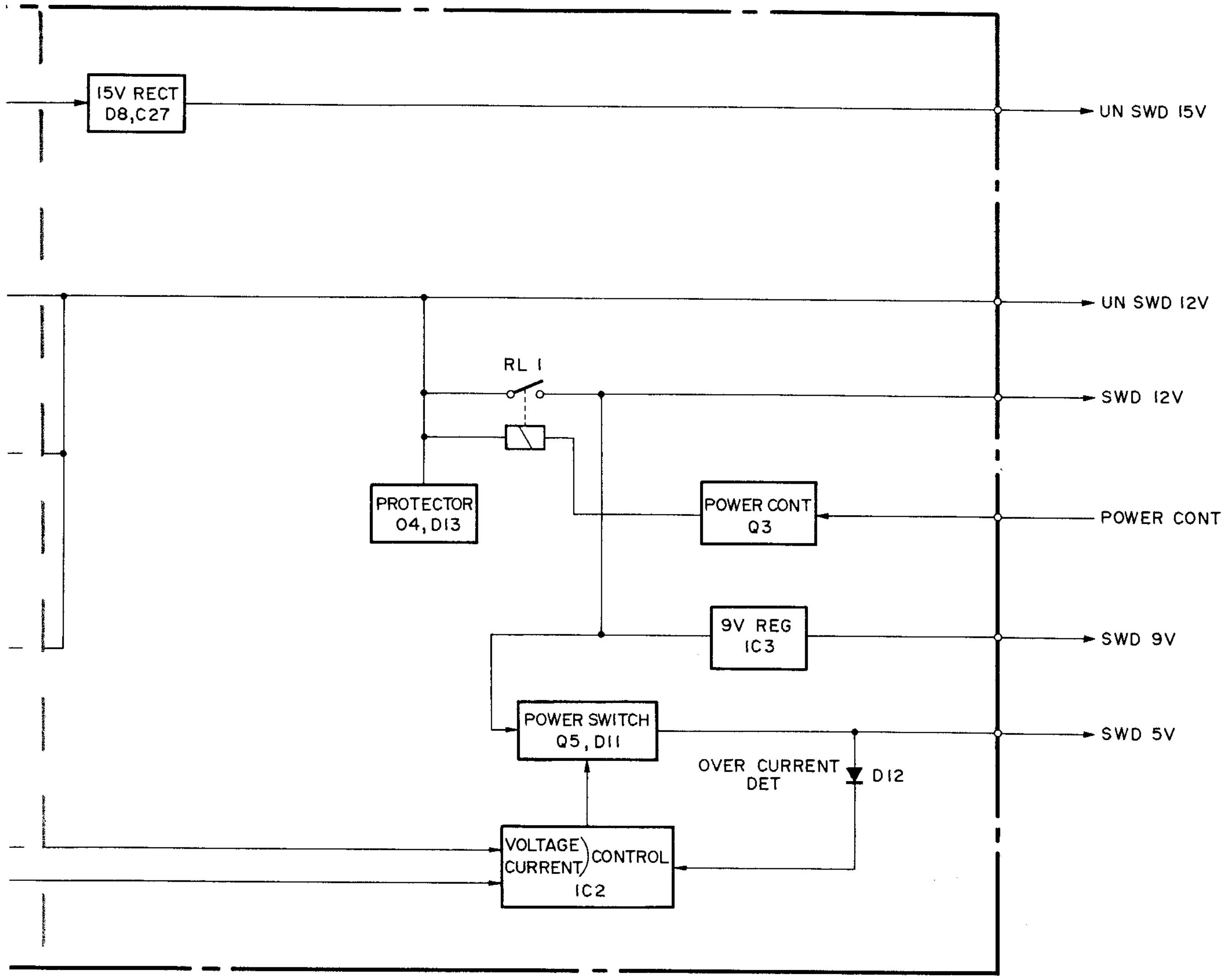

TIMER BLOCK
TU-21 BOARD
IC502
CHANNEL ADDRESS
A
B
C
D
INDEX 0
INDEX 1
INDEX 2
INDEX 3
IC501
K0
K1
K2
K3
R5
R4
POWER CONT
REC REDY
TIMER REC
REC PAUSE
CH UP
CH FLICKER
CNT PLS
CNT (+/-)
CNT RESET
POWER ON/QFF
BUFFER
Q5
D22
UNSWD 12V
BATTERY
D4

TIMER BLOCK DIAGRAM


TIMER BLOCK
TU-21 BOARD
IC502
CHANNEL ADDRESS
A
B
C
D
INDEX 0
INDEX 1
INDEX 2
INDEX 3
IC501
K0
K1
K2
K3
R5
R4
OPERATION BUTTON MATRIX
(TIMER SET, CLOCK SET SELECT, TIMER RECORD NEXT, COUNTER)
B+
D11 TIMER RECORD
LED DRIVER Q8,9,D12,21
R7,P2
DISPLAY TUBE
AC 2.4V
-30V
DISPLAY SW
DISPLAY DRIVER IC1-3
POWER CONT
REC REDY
TIMER REC
REC PAUSE
CH UP
CH FLICKER
CNT PLS
CNT (+/-)
CNT RESET
POWER ON/OFF
BUFFER Q5
D22
R11
R10
R13
R14
R15
IR0
R12
R9
R1
RESET
Vcc
R4 R5 K0-3
TIMER/COUNTER CPU
IC4
P0-4
O0-6
R0-7
RESET Q6,7,D10
+5V
5V REG Q2,D5,6
+5V
DC-DC CONVERTER Q3,4,D7-9
-30V RECT D1
AC 2.4V
DC-DC CONVERTER Q1
UNSWD 12V
BATTERY
D4

POWER SUPPLY BLOCK DIAGRAM


SR-11A BOARD
AC OUTLET
120Vac
60Hz
AC FILTER
T1-T3,C1,C2
POWER RECT
D1-D4,C6
POWER SWITCH
Q1,Q2,C7,C8
T4
RECT
D8
T7
15V RECT
D8,C27
UN SWD 15V
UN SWD 12V
T5
D7
T6
RECT
D5
PWM REG
VOLTAGE,CURRENT CONT
IC 1
11
8
12
15
16
1
2
5
14
5V
CURRENT CONT
VOLTAGE CONT
RL 1
SWD 12V
PROTECTOR
Q4,D13
POWER CONT
Q3
POWER CONT
9V REG
IC3
SWD 9V
POWER SWITCH
Q5,D11
SWD 5V
OVER CURRENT
DET
D12
VOLTAGE
CURRENT
CONTROL
IC2

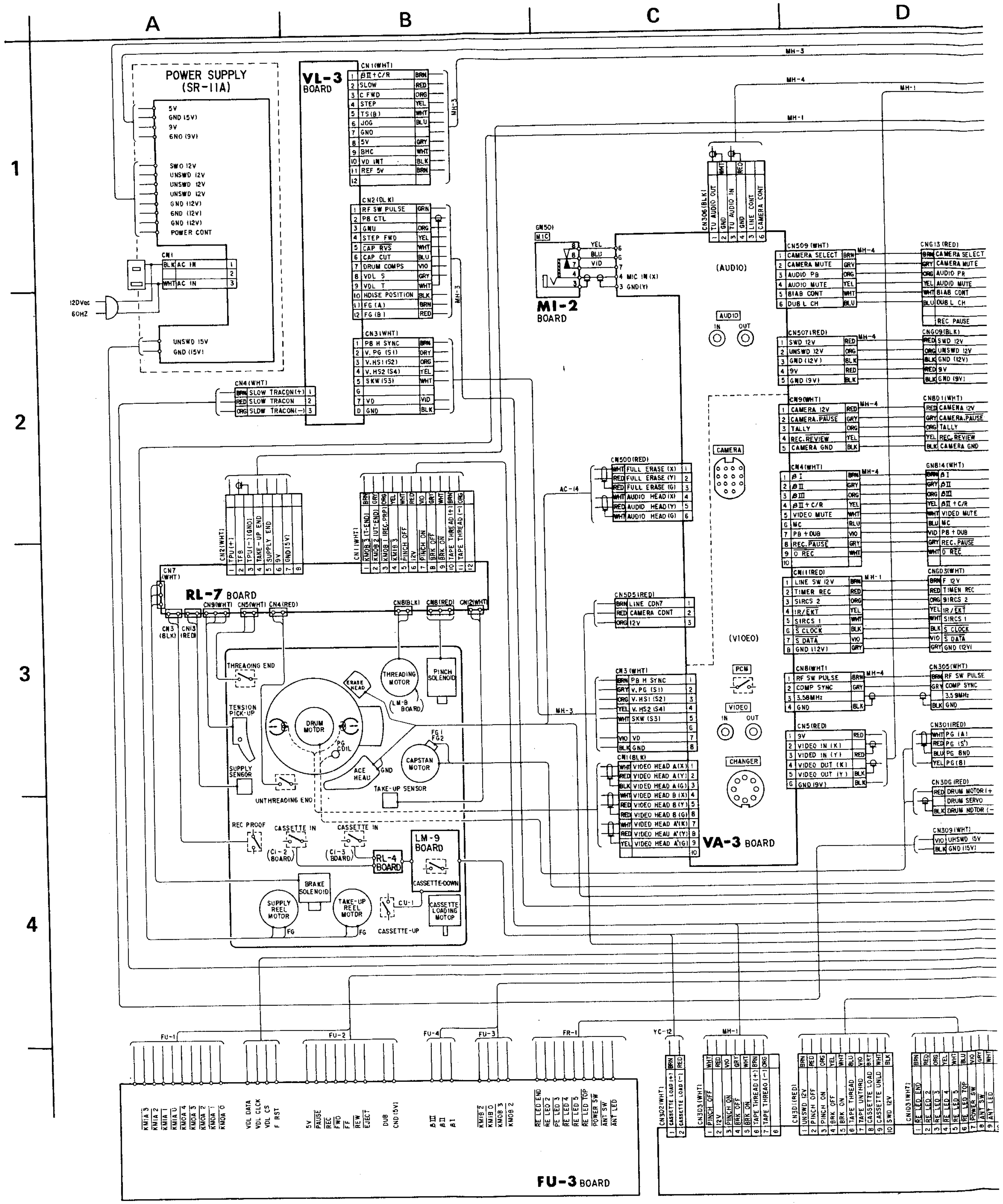

15V RECT
D8,C27
UN SWD 15V
UN SWD 12V
RL 1
SWD 12V
PROTECTOR
Q4, D13
POWER CONT
Q3
POWER CONT
9V REG
IC3
SWD 9V
POWER SWITCH
Q5, D11
SWD 5V
OVER CURRENT
DET
D12
VOLTAGE
CURRENT
CONTROL
IC2

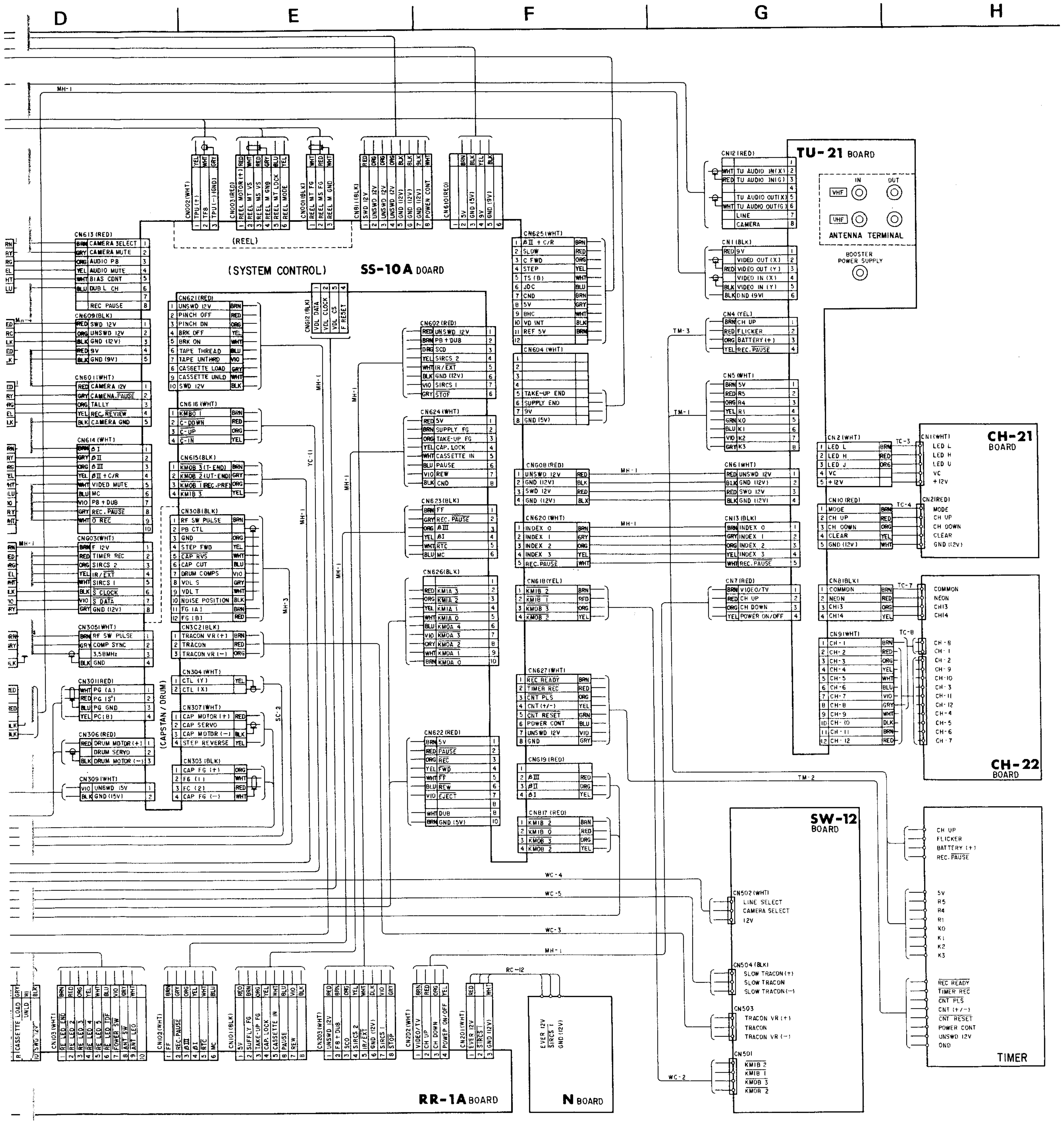
MEMO

SECTION 4

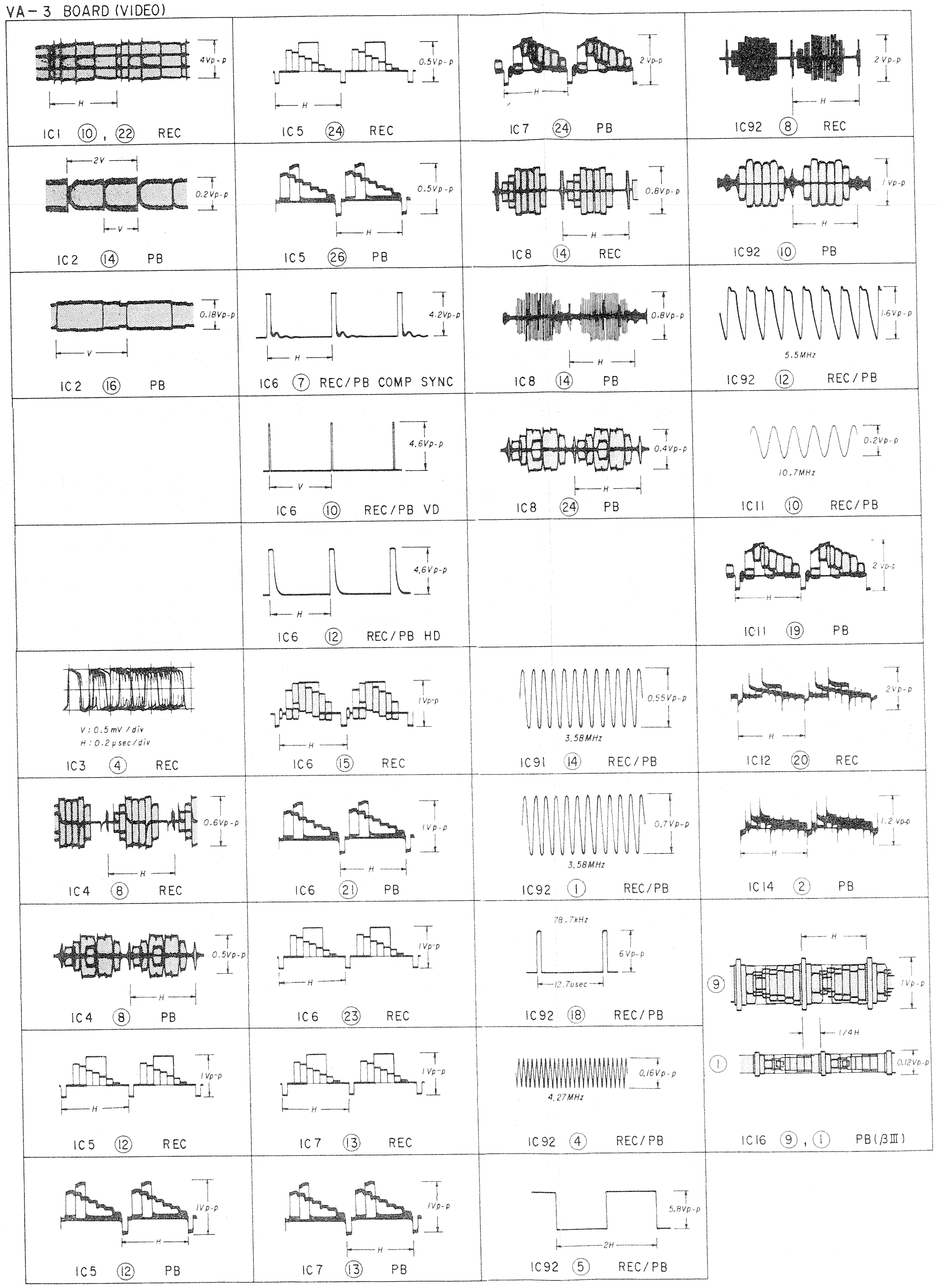
PRINTED WIRING BOARD AND SCHEMATIC DIAGRAM

FRAME SCHEMATIC DIAGRAM


A
B
C
D
1
2
3
4
POWER SUPPLY (SR-11A)
5V
GND (5V)
9V
GND (9V)
SWD 12V
UNSWD 12V
UNSWD 12V
UNSWD 12V
GND (12V)
GND (12V)
GND (12V)
POWER CONT
CN1
AC IN
AC IN
120Vac 60HZ
UNSWD 15V
GND (15V)
VL-3 BOARD
CN1 (WHT)
CN2 (BLK)
CN3 (WHT)
CN4 (WHT)
SLOW TRACON (+)
SLOW TRACON
SLOW TRACON (−)
MH-1
MH-3
MH-4
CN501 MIC
MI-2 BOARD
MIC IN (X)
GND (Y)
CN306 (BLK)
(AUDIO)
AUDIO IN OUT
CN509 (WHT)
CN507 (RED)
CN9 (WHT)
CN4 (WHT)
CN11 (RED)
CN8 (WHT)
CN5 (RED)
CN500 (RED)
CN505 (RED)
CN3 (WHT)
CN1 (BLK)
AC-14
CAMERA
(VIDEO)
PCM
VIDEO IN OUT
CHANGER
VA-3 BOARD
RL-7 BOARD
CN7 (WHT)
CN2 (WHT)
CN1 (WHT)
CN3 (BLK)
CN13 (RED)
CN9 (WHT)
CN5 (WHT)
CN4 (RED)
CN8 (BLK)
CN6 (RED)
CN12 (WHT)
THREADING END
TENSION PICK-UP
SUPPLY SENSOR
DRUM MOTOR
PG COIL
BRAKE HEAD
THREADING MOTOR
(LM-8 BOARD)
PINCH SOLENOID
FG1 FG2
CAPSTAN MOTOR
ACE HEAD
TAKE-UP SENSOR
UNTHREADING END
REC PROOF
CASSETTE IN
(CI-2 BOARD)
(CI-3 BOARD)
RL-4 BOARD
LM-9 BOARD
CASSETTE-DOWN
BRAKE SOLENOID
SUPPLY REEL MOTOR
TAKE-UP REEL MOTOR
CU-1
CASSETTE LOADING MOTOR
CASSETTE-UP
FG
FU-1
FU-2
FU-3
FU-4
FR-1
YC-12
FU-3 BOARD
CN613 (RED)
CN609 (BLK)
CN801 (WHT)
CN814 (WHT)
CN603 (WHT)
CN305 (WHT)
CN301 (RED)
CN306 (RED)
CN309 (WHT)
CN302 (WHT)
CN303 (WHT)
CN310 (RED)
CN103 (WHT)


D
E
F
G
H
(SYSTEM CONTROL) SS-10A BOARD
(REEL)
(CAPSTAN / DRUM)
TU-21 BOARD
ANTENNA TERMINAL
VHF
UHF
IN
OUT
BOOSTER POWER SUPPLY
CH-21 BOARD
CH-22 BOARD
SW-12 BOARD
TIMER
RR-1A BOARD
N BOARD
CN613 (RED)
CN609 (BLK)
CN601 (WHT)
CN614 (WHT)
CN603 (WHT)
CN305 (WHT)
CN301 (RED)
CN306 (RED)
CN309 (WHT)
CN621 (RED)
CN616 (WHT)
CN615 (BLK)
CN308 (BLK)
CN302 (BLK)
CN304 (WHT)
CN307 (WHT)
CN303 (BLK)
CN612 (BLK)
CN602 (RED)
CN624 (WHT)
CN623 (BLK)
CN626 (BLK)
CN622 (RED)
CN625 (WHT)
CN604 (WHT)
CN608 (RED)
CN620 (WHT)
CN618 (YEL)
CN627 (WHT)
CN619 (RED)
CN617 (RED)
CN602 (WHT)
CN603 (RED)
CN001 (BLK)
CN611 (BLK)
CN610 (RED)
CN12 (RED)
CN1 (BLK)
CN4 (YEL)
CN5 (WHT)
CN6 (WHT)
CN13 (BLK)
CN7 (RED)
CN2 (WHT)
CN10 (RED)
CN8 (BLK)
CN9 (WHT)
CN502 (WHT)
CN504 (BLK)
CN503
CN501
MH-1
MH-3
TM-1
TM-2
TM-3
TC-3
TC-4
TC-7
TC-8
YC-1
SC-2
WC-2
WC-3
WC-4
WC-5
RC-12
LINE SELECT
CAMERA SELECT
12V
SLOW TRACON (+)
SLOW TRACON
SLOW TRACON (−)
TRACON VR (+)
TRACON
TRACON VR (−)
KMIB 2
KMIB 1
KMOB 3
KMOB 2
CH UP
FLICKER
BATTERY (+)
REC. PAUSE
5V
R5
R4
R1
KO
K1
K2
K3
REC READY
TIMER REC
CNT PLS
CNT (+/−)
CNT RESET
POWER CONT
UNSWD 12V
GND
LED L
LED H
LED U
VC
+12V
MODE
CH UP
CH DOWN
CLEAR
GND (12V)
COMMON
NEON
CH13
CH14
EVER 12V
SIRCS 1
GND (12V)

VA-3 BOARD (VIDEO)



IC1 ⑩, ㉒ REC

IC2 ⑭ PB

IC2 ⑯ PB

IC3 ④ REC

IC4 ⑧ REC

IC4 ⑧ PB

IC5 ⑫ REC

IC5 ⑫ PB

IC5 ㉔ REC

IC5 ㉖ PB

IC6 ⑦ REC/PB COMP SYNC

IC6 ⑩ REC/PB VD

IC6 ⑫ REC/PB HD

IC6 ⑮ REC

IC6 ㉑ PB

IC6 ㉓ REC

IC7 ⑬ REC

IC7 ⑬ PB

IC7 ㉔ PB

IC8 ⑭ REC

IC8 ⑭ PB

IC8 ㉔ PB

IC91 ⑭ REC/PB

IC92 ① REC/PB

IC92 ⑱ REC/PB

IC92 ④ REC/PB

IC92 ⑤ REC/PB

IC92 ⑧ REC

IC92 ⑩ PB

IC92 ⑫ REC/PB

IC11 ⑩ REC/PB

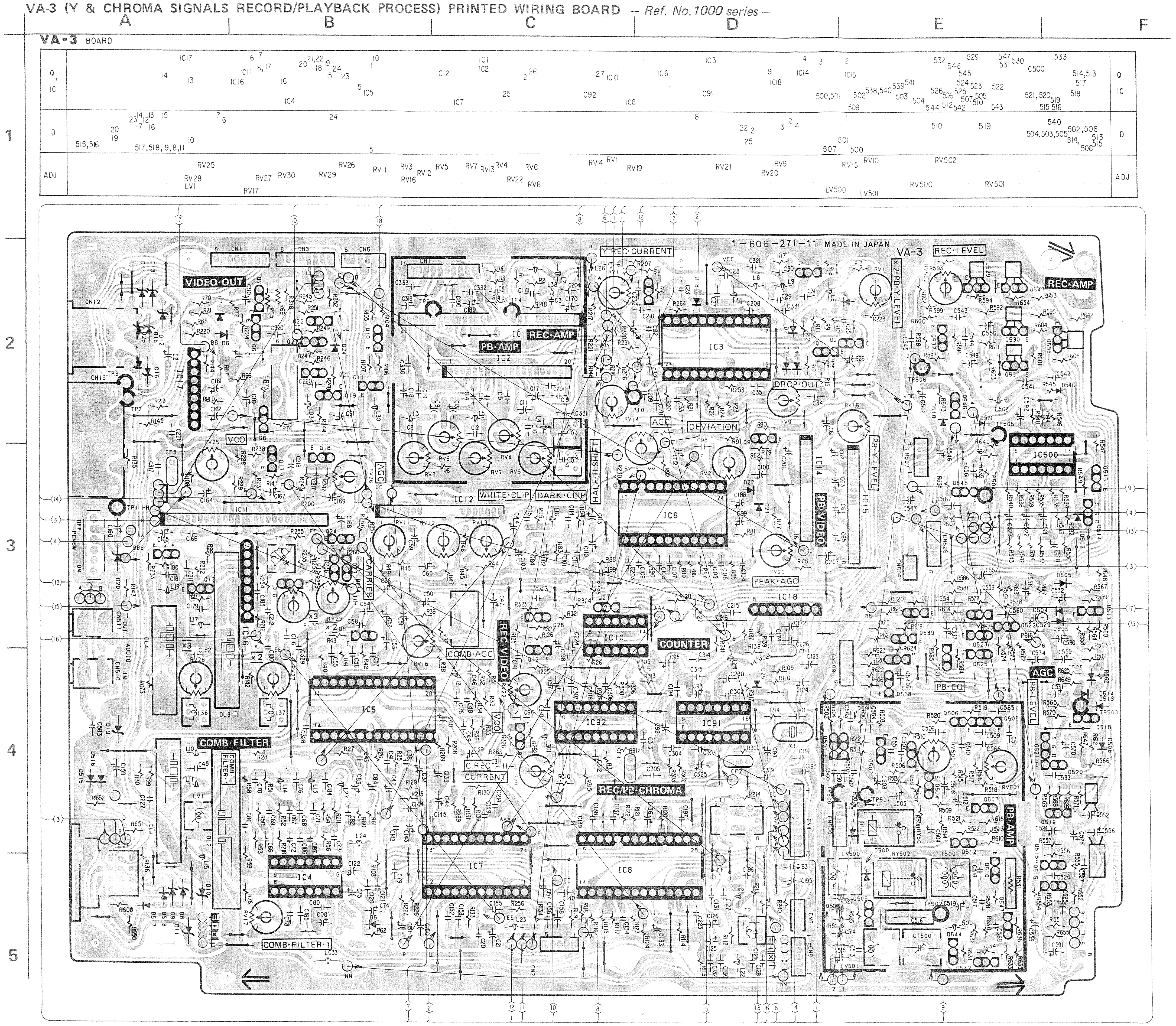
IC11 ⑲ PB

IC12 ⑳ REC

IC14 ② PB

IC16 ⑨, ① PB(βIII)

VA-3 (Y & CHROMA SIGNALS RECORD/PLAYBACK PROCESS) PRINTED WIRING BOARD *– Ref. No.1000 series –*


A
B
C
D
E
F
1
2
3
4
5
VA-3 BOARD
Q, IC
D
ADJ
1-606-271-11 MADE IN JAPAN
VA-3
VIDEO·OUT
REC·AMP
PB·AMP
IC2
IC3
IC1
REC·LEVEL
x2·PB·Y·LEVEL
DROP·OUT
AGC
DEVIATION
VCO
IC17
PB·Y·LEVEL
IC500
IC12
WHITE·CLIP
DARK·CLIP
HALF·H·SHIFT
IC6
IC14
PB·VIDEO
IC15
IC11
CARRIER
REC·VIDEO
PEAK·AGC
IC18
COUNTER
IC10
IC16
COMB·AGC
IC5
IC92
IC91
PB·EQ
PB·LEVEL
COMB·FILTER
C.REC·CURRENT
REC/PB·CHROMA
IC7
IC8
IC4
PB·AMP
COMB·FILTER·1
Y·REC·CURRENT

Note: The components identified by shading and mark ⚠ are critical for safety. Replace only with part number specified.

Note: Les composants identifiés par une trame et une marque ⚠ sont critiques pour la sécurité. Ne les remplacer que par une pièce portant le numéro spécifié.

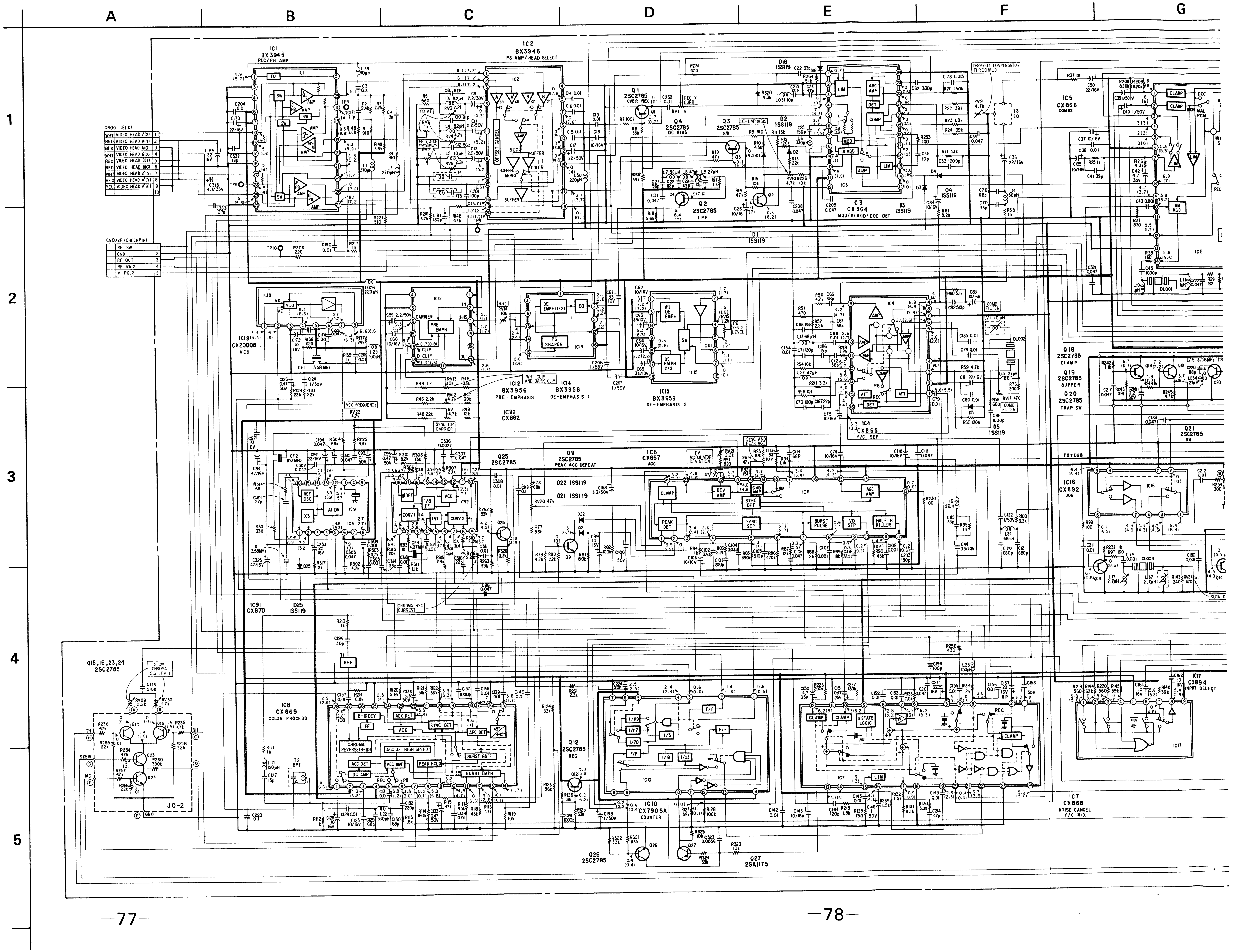
Note:

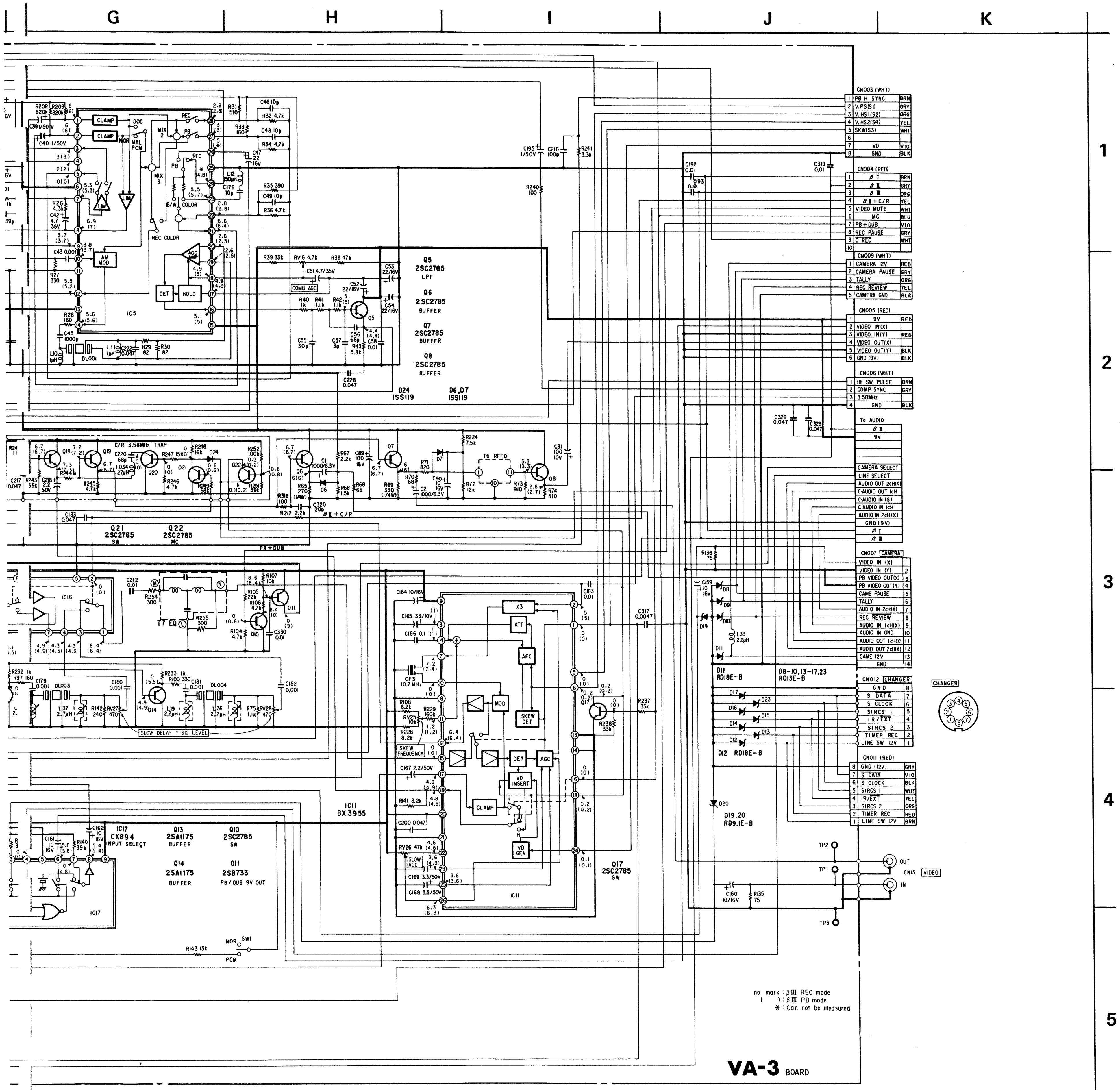
- All capacitors are in μF unless otherwise noted. pF : μμF 50WV or less are not indicated except for electrolytics and tantalums.
- All resistors are in ohms, ¼W unless otherwise noted. kΩ : 1000 Ω, MΩ : 1000 kΩ
- ▭ : nonflammable resistor.
- ▭ : fusible resistor.
- △ : internal component.
- ▭ : panel designation.
- All variable and adjustable resistors have characteristic curve B, unless otherwise noted.
- The red lines show the main voltages.
- Marked * is not able to measure the voltage of it's position.
- All voltages are dc measured with a VOM (20 kΩ/V).

```
When indicating parts by refer-
ence number, please include
the board name.
```

VA-3 (Y & CHROMA SIGNALS RECORD/PLAYBACK PROCESS) BOARD SCHEMATIC DIAGRAM

— Ref. No.1000 series —


A
B
C
D
E
F
G
1
2
3
4
5
IC1 BX3945 REC/PB AMP
IC2 BX3946 PB AMP/HEAD SELECT
Q1 2SC2785 OVER REC
Q4 2SC2785 DC BIAS
Q3 2SC2785 SW
Q2 2SC2785 LPF
D18 1SS119
D2 1SS119
IC3 CX864 MOD/DEMOD/DOC DET
D3 1SS119
D4 1SS119
D1 1SS119
DROPOUT COMPENSATOR THRESHOLD
IC5 CX866 COMB2
CN001 (BLK)
VIDEO HEAD A(X)
VIDEO HEAD A(Y)
VIDEO HEAD A(G)
VIDEO HEAD B(X)
VIDEO HEAD B(Y)
VIDEO HEAD B(G)
VIDEO HEAD A'(X)
VIDEO HEAD A'(Y)
VIDEO HEAD A'(G)
CN002R (CHECKPIN)
RF SW1
GND
RF OUT
RF SW2
V PG,2
TP10
IC18 CX20008 VCO
IC12 BX3956 PRE-EMPHASIS
IC14 BX3958 DE-EMPHASIS 1
IC15 BX3959 DE-EMPHASIS 2
IC92 CX882
IC4 CX865 Y/C SEP
D5 1SS119
Q18 2SC2785 CLAMP
Q19 2SC2785 BUFFER
Q20 2SC2785 TRAP SW
Q21 2SC2785 SW
VCO FREQUENCY
WHT CLIP AND DARK CLIP
SYNC TIP CARRIER
COMB FILTER
Q25 2SC2785
Q9 2SC2785 PEAK AGC DEFEAT
D22 1SS119
D21 1SS119
IC6 CX867 AGC
FM MODULATOR DEVIATION
SYNC AND PEAK AGC
IC16 CX892 JOG
PB+DUB
IC91 CX870
D25 1SS119
CHROMA REC CURRENT
BPF
Q15,16,23,24 2SC2785
SLOW CHROMA SIG LEVEL
J0-2
IC8 CX869 COLOR PROCESS
Q12 2SC2785 REG
IC10 CX7905A COUNTER
Q26 2SC2785
Q27 2SA1175
IC7 CX868 NOISE CANCEL Y/C MIX
IC17 CX894 INPUT SELECT


G
H
I
J
K
1
2
3
4
5
IC5
CLAMP
DOC
MIX
REC
PB
AM MOD
DET
HOLD
AGC
COLOR
B/W
REC COLOR
COMB AGC
Q5 2SC2785 LPF
Q6 2SC2785 BUFFER
Q7 2SC2785 BUFFER
Q8 2SC2785 BUFFER
D24 1SS119
D6,D7 1SS119
C/R 3.58MHz TRAP
Q21 2SC2785 SW
Q22 2SC2785 MC
T6 RFEQ
PB+DUB
IC16
T7 EQ
SLOW DELAY Y SIG LEVEL
IC11 BX3955
X3
ATT
AFC
MOD
SKEW DET
DET
AGC
CLAMP
VD INSERT
VD GEN
SKEW FREQUENCY
SLOW AGC
Q17 2SC2785 SW
IC17 CX894 INPUT SELECT
Q13 2SA1175 BUFFER
Q10 2SC2785 SW
Q14 2SA1175 BUFFER
Q11 2SB733 PB/DUB 9V OUT
NOR SW1 PCM
D11 RD18E-B
D8-10,13-17,23 RD13E-B
D12 RD18E-B
D19,20 RD9.1E-B
CN003 (WHT)
1 PB H SYNC BRN
2 V.PG(S1) GRY
3 V.HS1(S2) ORG
4 V.HS2(S4) YEL
5 SKW(S3) WHT
6
7 VD VIO
8 GND BLK
CN004 (RED)
1 φI BRN
2 φII GRY
3 φIII ORG
4 φII+C/R YEL
5 VIDEO MUTE WHT
6 MC BLU
7 PB+DUB VIO
8 REC PAUSE GRY
9 Q REC WHT
10
CN009 (WHT)
1 CAMERA 12V RED
2 CAMERA PAUSE GRY
3 TALLY ORG
4 REC REVIEW YEL
5 CAMERA GND BLK
CN005 (RED)
1 9V RED
2 VIDEO IN(X)
3 VIDEO IN(Y) RED
4 VIDEO OUT(X)
5 VIDEO OUT(Y) BLK
6 GND (9V) BLK
CN006 (WHT)
1 RF SW PULSE BRN
2 COMP SYNC GRY
3 3.58MHz
4 GND BLK
To AUDIO
φII
9V
CAMERA SELECT
LINE SELECT
AUDIO OUT 2ch(X)
C-AUDIO OUT 1ch
C-AUDIO IN (G)
C-AUDIO IN 1ch
AUDIO IN 2ch(X)
GND (9V)
φI
φIII
CN007 CAMERA
VIDEO IN (X) 1
VIDEO IN (Y) 2
PB VIDEO OUT(X) 3
PB VIDEO OUT(Y) 4
CAME PAUSE 5
TALLY 6
AUDIO IN 2ch(X) 7
REC REVIEW 8
AUDIO IN 1ch(X) 9
AUDIO IN GND 10
AUDIO OUT 1ch(X) 11
AUDIO OUT 2ch(X) 12
CAME 12V 13
GND 14
CN012 CHANGER
GND 8
S DATA 7
S CLOCK 6
SIRCS 1 5
IR/EXT 4
SIRCS 2 3
TIMER REC 2
LINE SW 12V 1
CHANGER
CN011 (RED)
8 GND (12V) GRY
7 S DATA VIO
6 S CLOCK BLK
5 SIRCS 1 WHT
4 IR/EXT YEL
3 SIRCS 2 ORG
2 TIMER REC RED
1 LINE SW 12V BRN
TP1
TP2
TP3
OUT
IN
CN13 VIDEO
VA-3 BOARD

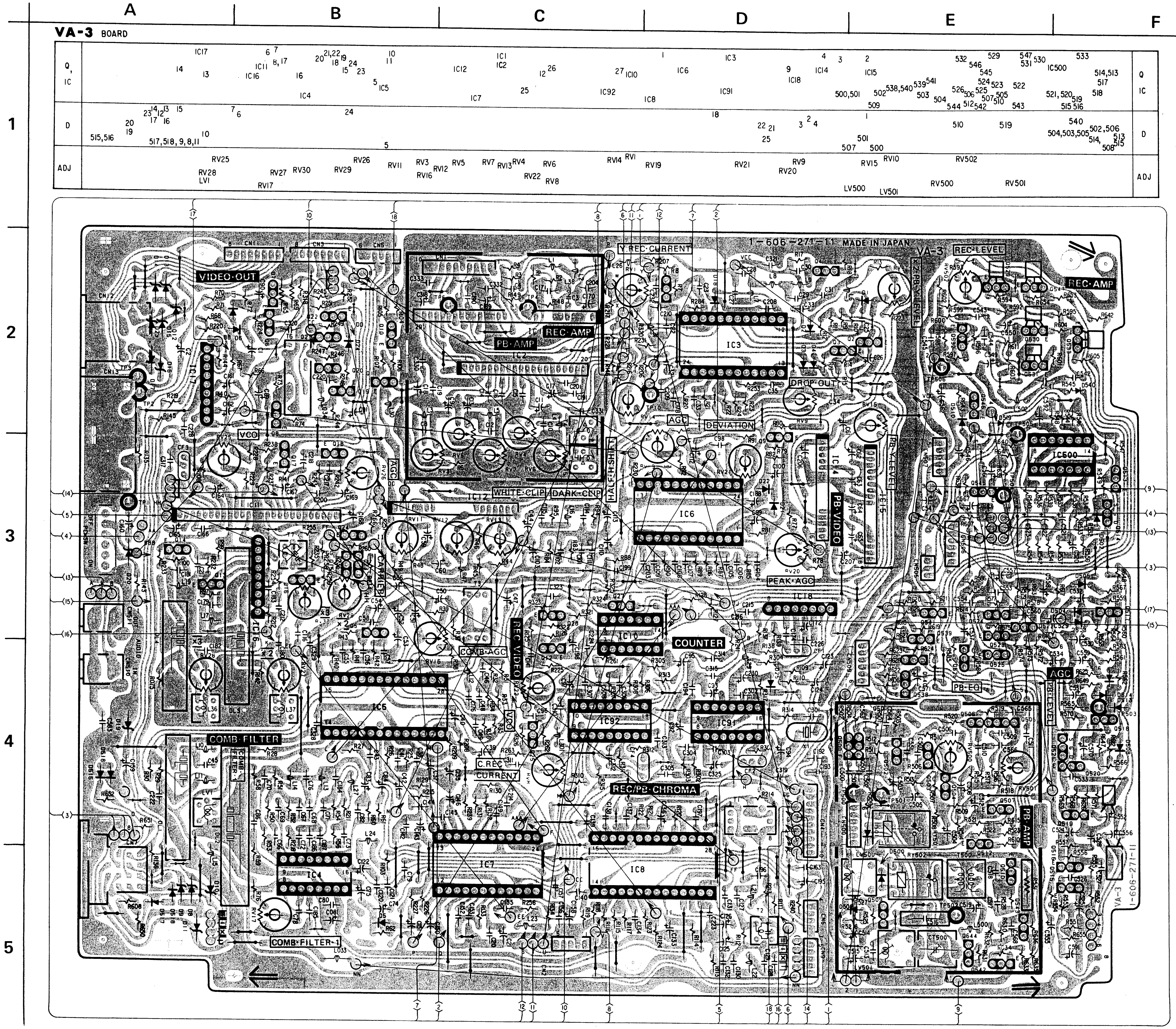
no mark : βIII REC mode
( ) : βIII PB mode
※ : Can not be measured

When indicating parts by reference number, please include the board name.

VA-3 (AUDIO RECORD/PLAYBACK PROCESS) AND MI-2 (MIC JACK) PRINTED WIRING BOARD – *Ref. No. VA-3 BOARD: 1000 series MI-2 BOARD: 2000 series –*

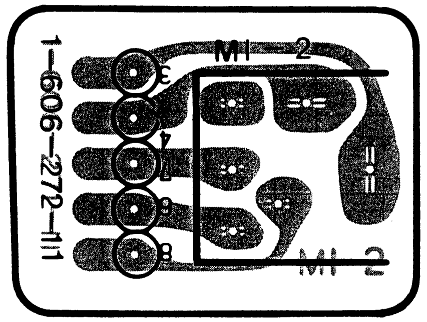
VA-3 BOARD

	A	B	C	D	E	F	
Q, IC	IC17, 14, 13	6, 7, 8, 17, IC11, IC16, 16, 20, 21, 22, 19, 18, 24, 15, 23, 10, 11, 5, IC5, IC4	IC12, IC1, IC2, 12, 26, 25, IC7, 27, IC10, IC92	1, IC6, IC3, IC91, IC8, 9, IC18, IC14, 4, 3, 500, 501	2, IC15, 502, 538, 540, 539, 541, 503, 504, 509, 532, 546, 529, 545, 524, 523, 526, 506, 525, 507, 505, 510, 544, 512, 542, 543, 522, 547, 531, 530	IC500, 533, 514, 513, 517, 518, 521, 520, 519, 515, 516	Q IC
D	515, 516, 20, 19, 23, 14, 12, 13, 15, 17, 16, 517, 518, 9, 8, 11, 10, 7	6, 24, 5		18, 22, 21, 25, 3, 2, 4, 507	1, 501, 500, 510, 519	540, 504, 503, 505, 502, 506, 514, 513, 515, 508	D
ADJ	RV25, RV28, LV1	RV17, RV27, RV30, RV29, RV26, RV11, RV3, RV16, RV12	RV5, RV7, RV13, RV4, RV6, RV22, RV8, RV14, RV1	RV19, RV21, RV20, RV9	RV15, RV10, RV502, LV500, LV501, RV500, RV501		ADJ

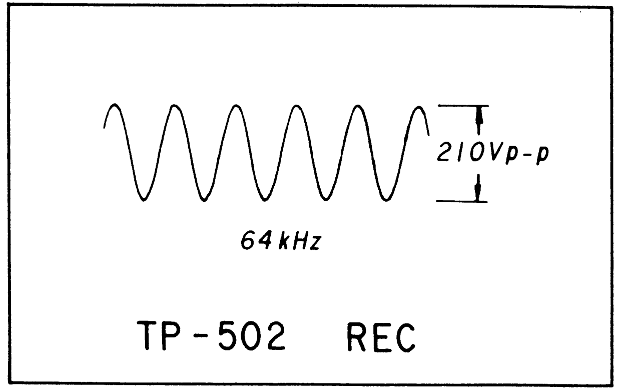

A
B
C
D
E
F
G
H
1
2
3
4
5
1-606-271-11 MADE IN JAPAN
VA-3
VIDEO·OUT
PB·AMP
REC·AMP
Y.REC·CURRENT
REC·LEVEL
REC·AMP
DROP·OUT
AGC
DEVIATION
PB·Y·LEVEL
PB·VIDEO
PEAK·AGC
VCO
AGC
WHITE·CLIP
DARK·CLIP
HALF·H·SHIFT
CARRIER
COUNTER
COMB·AGC
REC·VIDEO
COMB·FILTER
COMB·FILTER-1
C.REC CURRENT
REC/PB·CHROMA
PB·EQ
AGC
PB·LEVEL
PB·AMP
IC1
IC2
IC3
IC4
IC5
IC6
IC7
IC8
IC10
IC12
IC14
IC15
IC16
IC17
IC18
IC91
IC92
IC500
CN1
CN3
CN5
CN11
CN12
CN13
17
10
18
8
6
11
1
12
7
2
14
5
4
13
15
16
3
9
VA-3 1-606-271-11

MI-
1-606-2272-11
VA-

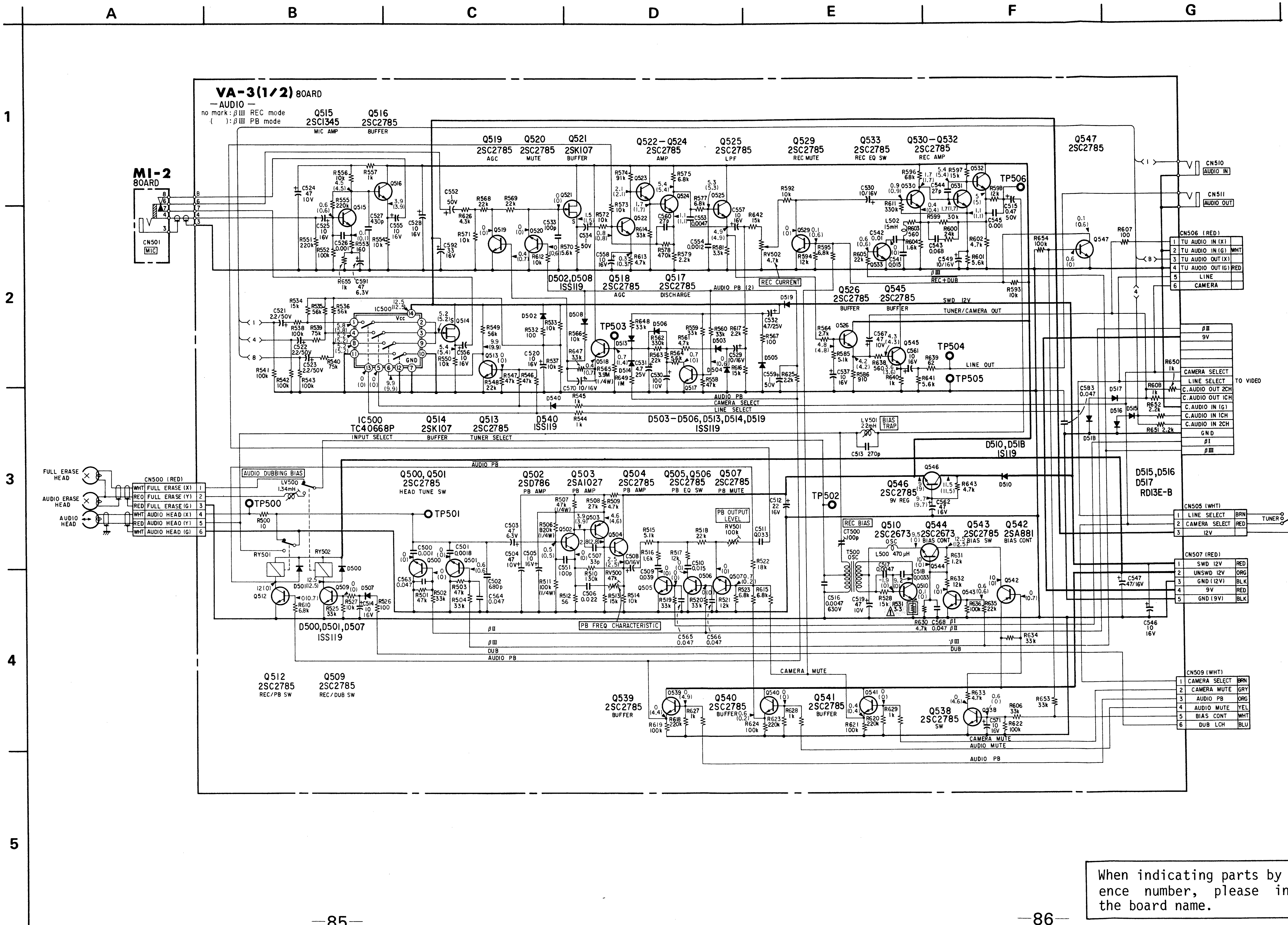
MI-2 BOARD


1-606-272-11
MI-2
MI-2

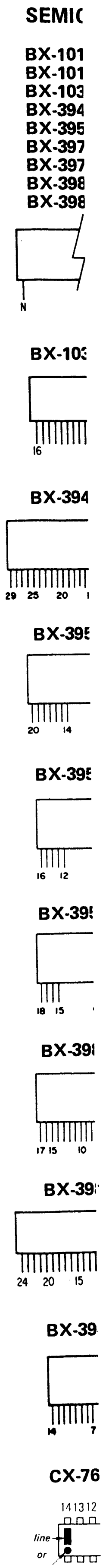
VA-3 BOARD (AUDIO)



VA-3 (AUDIO RECORD/PLAYBACK PROCESS) AND MI-2 (MIC JACK) BOARD SCHEMATIC DIAGRAM – *Ref. No. VA-3 BOARD: 1000 series MI-2 BOARD: 2000 series* –

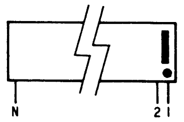

A
B
C
D
E
F
G
1
2
3
4
5
VA-3(1/2) BOARD
—AUDIO—
no mark: βIII REC mode
( ): βIII PB mode
MI-2 BOARD
CN501 MIC
Q515 2SC1345 MIC AMP
Q516 2SC2785 BUFFER
Q519 2SC2785 AGC
Q520 2SC2785 MUTE
Q521 2SK107 BUFFER
Q522–Q524 2SC2785 AMP
Q525 2SC2785 LPF
Q529 2SC2785 REC MUTE
Q533 2SC2785 REC EQ SW
Q530–Q532 2SC2785 REC AMP
Q547 2SC2785
TP506
CN510 AUDIO IN
CN511 AUDIO OUT
CN506 (RED)
TU AUDIO IN (X)
TU AUDIO IN (G)
TU AUDIO OUT (X)
TU AUDIO OUT (G)
LINE
CAMERA
D502, D508 ISS119
Q518 2SC2785 AGC
Q517 2SC2785 DISCHARGE
AUDIO PB
REC CURRENT
Q526 2SC2785 BUFFER
Q545 2SC2785 BUFFER
SWD 12V
TUNER/CAMERA OUT
TP503
TP504
TP505
LINE OUT
IC500
CAMERA SELECT
LINE SELECT
C.AUDIO OUT 2CH
C.AUDIO OUT 1CH
C.AUDIO IN (G)
C.AUDIO IN 1CH
C.AUDIO IN 2CH
GND
βI
βIII
TO VIDEO
IC500 TC4066BP INPUT SELECT
Q514 2SK107 BUFFER
Q513 2SC2785 TUNER SELECT
D540 ISS119
D503–D506, D513, D514, D519 ISS119
LV501 22mH BIAS TRAP
C513 270p
D510, D518 ISS119
FULL ERASE HEAD
AUDIO ERASE HEAD
AUDIO HEAD
CN500 (RED)
FULL ERASE (X)
FULL ERASE (Y)
FULL ERASE (G)
AUDIO HEAD (X)
AUDIO HEAD (Y)
AUDIO HEAD (G)
AUDIO DUBBING BIAS
LV500 1.34mH
TP500
TP501
RY501
RY502
Q500, Q501 2SC2785 HEAD TUNE SW
Q502 2SD786 PB AMP
Q503 2SA1027 PB AMP
Q504 2SC2785 PB AMP
Q505, Q506 2SC2785 PB EQ SW
Q507 2SC2785 PB MUTE
PB OUTPUT LEVEL
PB FREQ CHARACTERISTIC
TP502
Q546 2SC2785 9V REG
D515, D516 D517 RD13E-B
CN505 (WHT)
LINE SELECT
CAMERA SELECT
12V
TUNER
REC BIAS
Q510 2SC2673 OSC
Q544 2SC2673 BIAS CONT
Q543 2SC2785 BIAS SW
Q542 2SA881 BIAS CONT
T500 OSC
L500 470μH
CN507 (RED)
SWD 12V
UNSWD 12V
GND (12V)
9V
GND (9V)
D500, D501, D507 ISS119
Q512 2SC2785 REC/PB SW
Q509 2SC2785 REC/DUB SW
βII
βIII
DUB
AUDIO PB
CAMERA MUTE
CN509 (WHT)
CAMERA SELECT
CAMERA MUTE
AUDIO PB
AUDIO MUTE
BIAS CONT
DUB LCH
Q539 2SC2785 BUFFER
Q540 2SC2785 BUFFER
Q541 2SC2785 BUFFER
Q538 2SC2785 SW
AUDIO MUTE

When indicating parts by reference number, please include the board name.

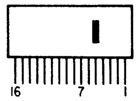

SEMI(
BX-101
BX-101
BX-103
BX-394
BX-395
BX-397
BX-397
BX-398
BX-398
BX-10
BX-394
BX-39
BX-39
BX-39
BX-39
BX-39
BX-39
CX-76

SEMICONDUCTOR

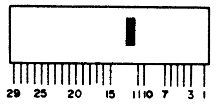
BX-1013-1
BX-1016
BX-1038
BX-3946-1
BX-3955
BX-3976
BX-3978
BX-3983
BX-3988



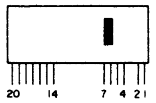
BX-1039



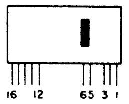
BX-3945-1


29 25 20 15 1110 7 3 1

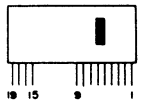
BX-3956-1



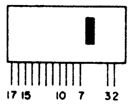
BX-3958-1



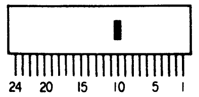
BX-3959-1



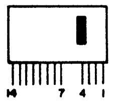
BX-3980



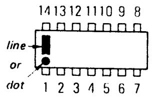
BX-3981


24 20 15 10 5 1

BX-3984

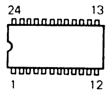


CX-761A


14 13 12 11 10 9 8
line or dot
1 2 3 4 5 6 7

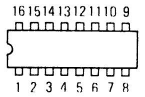
(Top view)

CX-864
CX-867



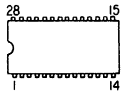
(Top view)

CX-866
CX-870A
HD14538BP
TC4051BP
TL494CN


16 15 14 13 12 11 10 9
1 2 3 4 5 6 7 8

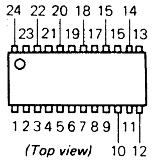
(Top view)

CX-866
CX-860



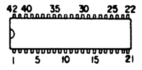
(Top view)

CX-868


24 22 20 18 15 14
23 21 19 17 15 13
1 2 3 4 5 6 7 8 9 11
10 12

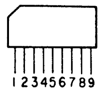
(Top view)

CX-885A
CX-194A-2

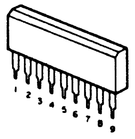

42 40 35 30 25 22
1 5 10 15 21

(Top view)

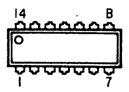
CX-892



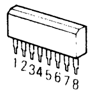
CX-804



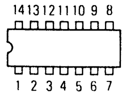
CX-7905A
MB3759



CX-20008
M51903L

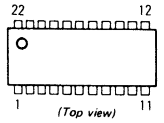


SN74LS04N
TC4011BP
TC4013BP
TC4030BP
TC4066BP
TC4069UBP
TC4071BP
TC4081BP
TC40H004P
TC6026BP
µPC324C
µPC339C


14 13 12 11 10 9 8
1 2 3 4 5 6 7

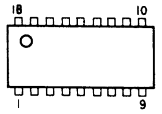
(Top view)

MB8747



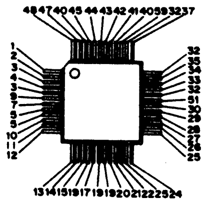
(Top view)

MB8758

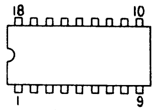


(Top view)

MB8845-527
MB8845-528
MB8845-549
MB8845-495M
µPD651G-517
µPD651G-518

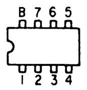

48 47 46 45 44 43 42 41 40 39 38 37
1 2 3 4 5 6 7 8 9 10 11 12
36 35 34 33 32 31 30 29 28 27 26 25
13 14 15 16 17 18 19 20 21 22 23 24

MSL915RS



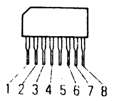
(Top view)

µPC393C

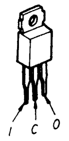


(Top view)

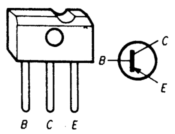
µPC1373H



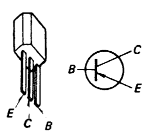
µPC78M08H



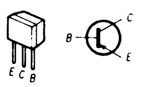
2SA881
2SA937



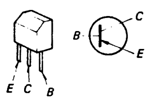
2SA1027R



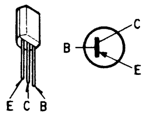
2SA1175



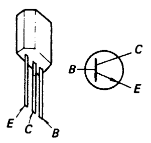
2SB733
2SB733-U2



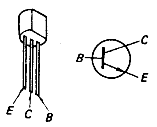
2SB772-P



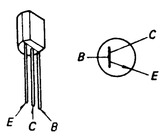
2SC403L



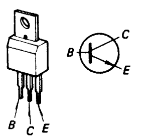
2SC1345
2SC536SP
2SD786



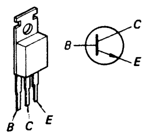
2SC1364



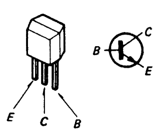
2SC1760



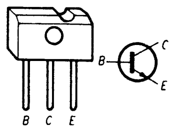
2SC1816



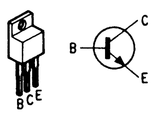
2SC1941



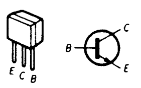
2SC2021



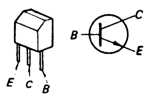
2SC2502



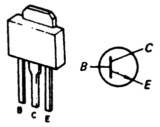
2SC2785



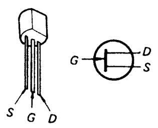
2SD773
2SD774



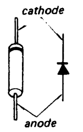
2SD1164



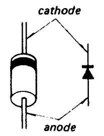
2SK107-3



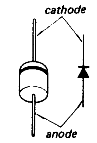
10E2
1S1585
1S8106
RD4.3E-B1
RD5.1E-B1
RD5.1E-B2
RD5.1E-B3
RD5.8E-B
RD9.1E-B
RD13E-B
RD15E-B3
RD18E-B
RD24E-B
RD36E-B


cathode
anode

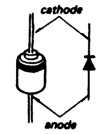
1S2348-1
ERA81-004
ERB81-004
S3V40


cathode
anode

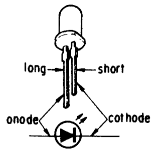
1SS119


cathode
anode

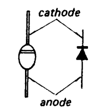
1SS133


cathode
anode

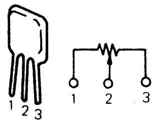
BR3402S
PG3432SY


long
short
anode
cathode

GH3F

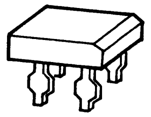

cathode
anode

PH302A
PH302B

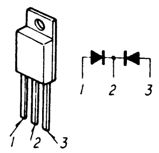


(Marking side view)

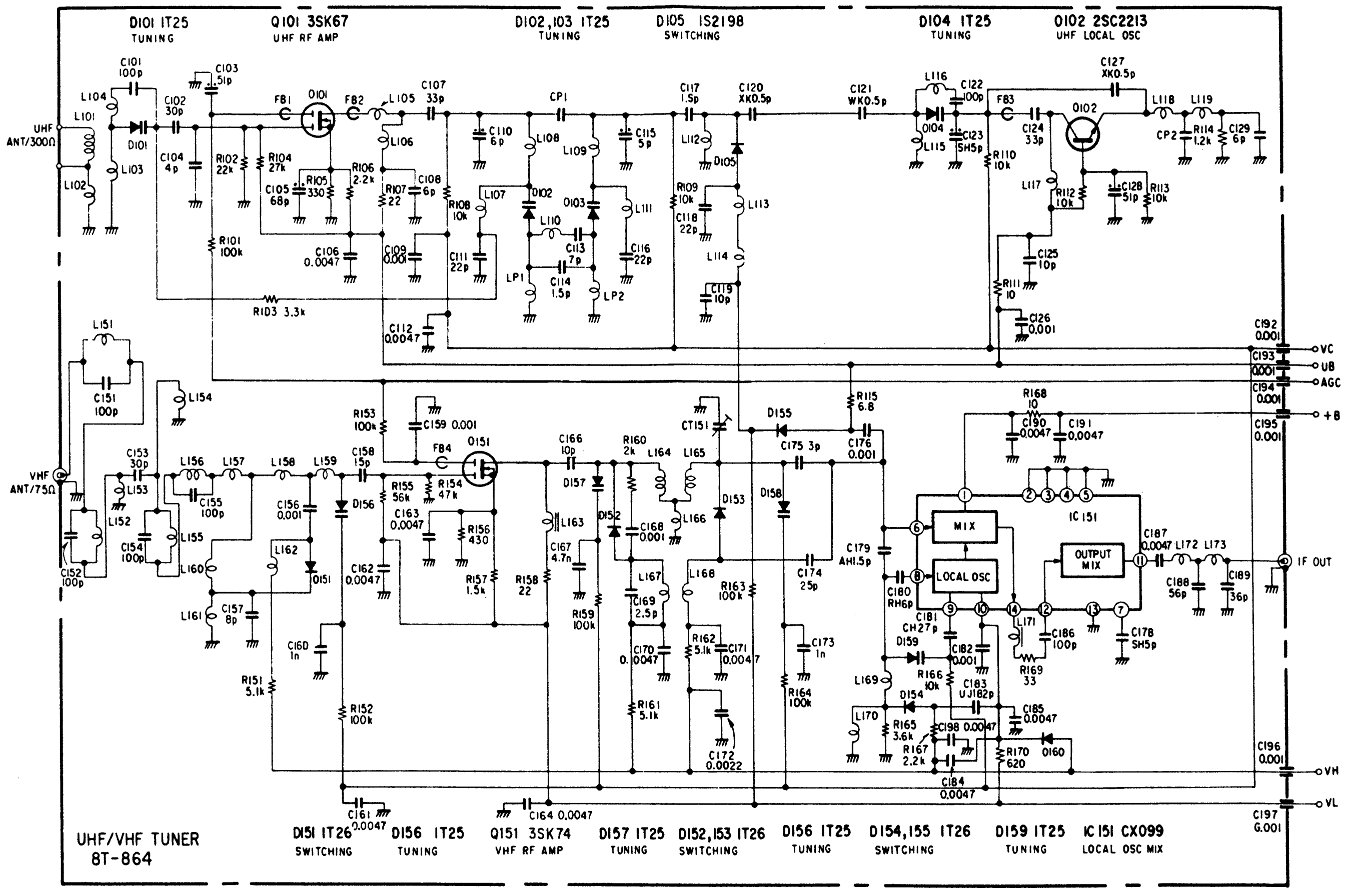
S1WB10



S5KC20



TUNER SCHEMATIC DIAGRAM
– UHF/VHF TUNER BT-664 –

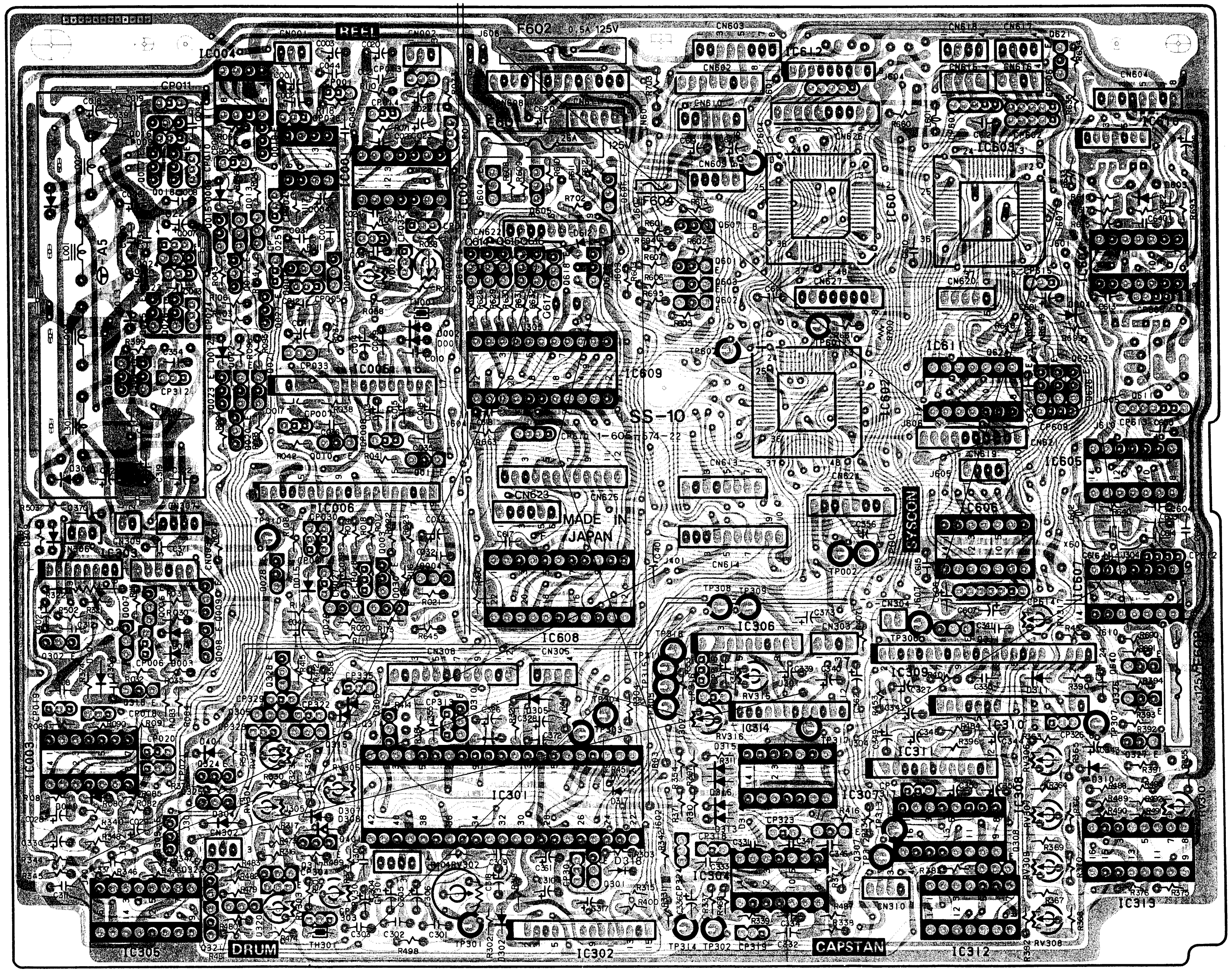

D101 1T25 TUNING
Q101 3SK67 UHF RF AMP
D102,103 1T25 TUNING
D105 1S2198 SWITCHING
D104 1T25 TUNING
Q102 2SC2213 UHF LOCAL OSC
UHF ANT/300Ω
VHF ANT/75Ω
VC
UB
AGC
+B
IF OUT
VH
VL
MIX
LOCAL OSC
OUTPUT MIX
IC151
UHF/VHF TUNER 8T-864
D151 1T26 SWITCHING
D156 1T25 TUNING
Q151 3SK74 VHF RF AMP
D157 1T25 TUNING
D152,153 1T26 SWITCHING
D156 1T25 TUNING
D154,155 1T26 SWITCHING
D159 1T25 TUNING
IC151 CX099 LOCAL OSC MIX

SS-10A (SYSTEM CONTROL) AND MB-3 (SWITCH) PRINTED WIRING BOARD

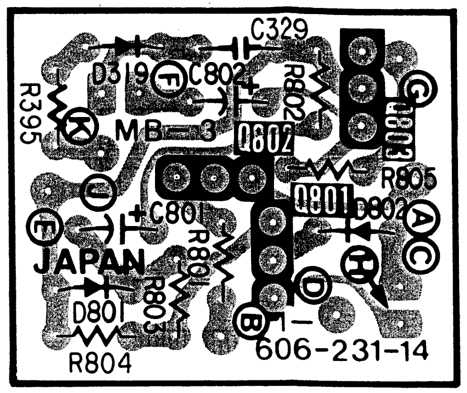
– Ref. No.SS-10A BOARD: 3000 series MB-3 BOARD: 4000 series –

SS-10A BOARD

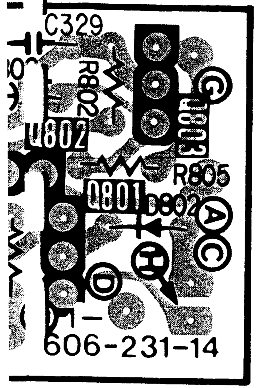
Q, IC	302, IC003, 304, IC303, 303, 007, 318, IC305, 016, 017,018, 024, 025,026, 006, 309, 325, 322, 015, 023, 009, 008, 324,305, 321, IC004, 014,013, 022, 012, 020, 021, 027, 028, 328, 320, 019, 001, 317, IC001, 010, 029, 315, IC006, 002, IC005, 003, 314, 401, 030, 011, 004, 613, 310, IC002, 604, IC301, 614,615,616,617, 618, 605, IC608, 620, 301, IC302, 606, IC609, 607, 601, 603,602, IC304, IC306, IC314, IC612, IC307, 307, IC601, IC602, IC309, IC311, IC611, IC312, IC606, 311, 624, IC603, IC310, 10308, 308, 621, IC605, IC604, 625, 626, IC607, 640, 326, 327, IC610, IC313	Q, IC
D	309, 303, 010, 009, 301, 013, 014, 003, 401, 008, 304, 012, 015, 312, 307, 308, 306, 002, 001, 302, 305, 317, 318, 315, 316, 314, 313, 311, 604, 310, 603	D
ADJ	RV314, RV304, RV303, RV305, RV301, RV002, RV001, RV302, RV316, RV315, RV317, RV306, RV307, RV309, RV308, RV310	ADJ

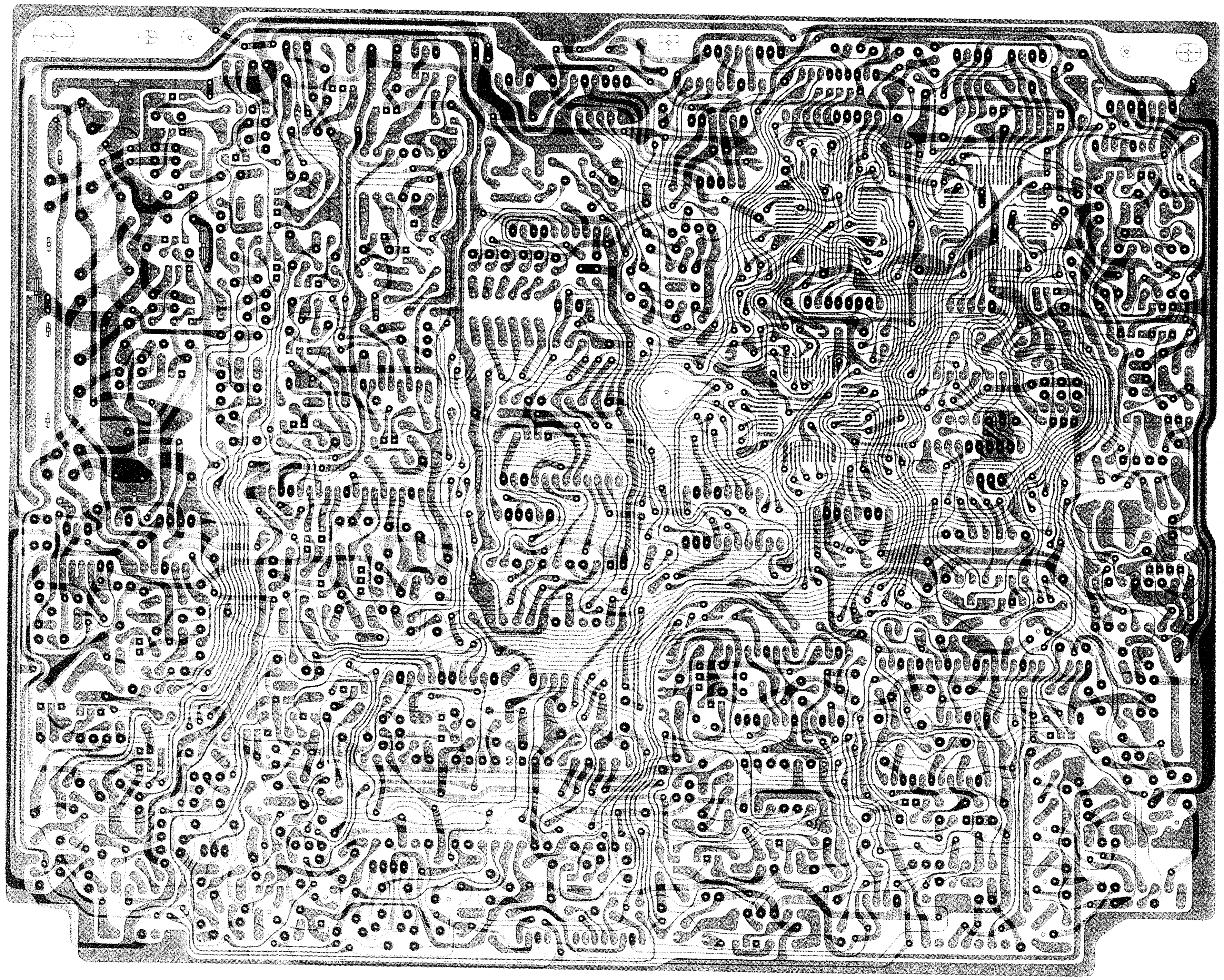

REEL
IC004
F602 0.5A 125V
CN603
CN612
IC612
IC603
IC601
IC609
SS-10
1-606-674-22
MADE IN JAPAN
SYSCON
IC605
IC606
IC607
IC608
IC306
IC309
IC310
IC311
IC314
IC303
IC301
IC302
IC304
IC305
IC307
IC308
IC312
IC313
DRUM
CAPSTAN

MB-3 BOARD

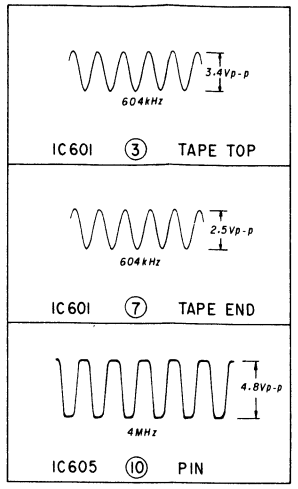

C329
D319
C802
R802
R395
MB-3
R805
C801
D802
Q802
Q801
JAPAN
D801
R803
R801
R804
1-606-231-14
A
B
C
D
E
F
G
H
J
K

ARD

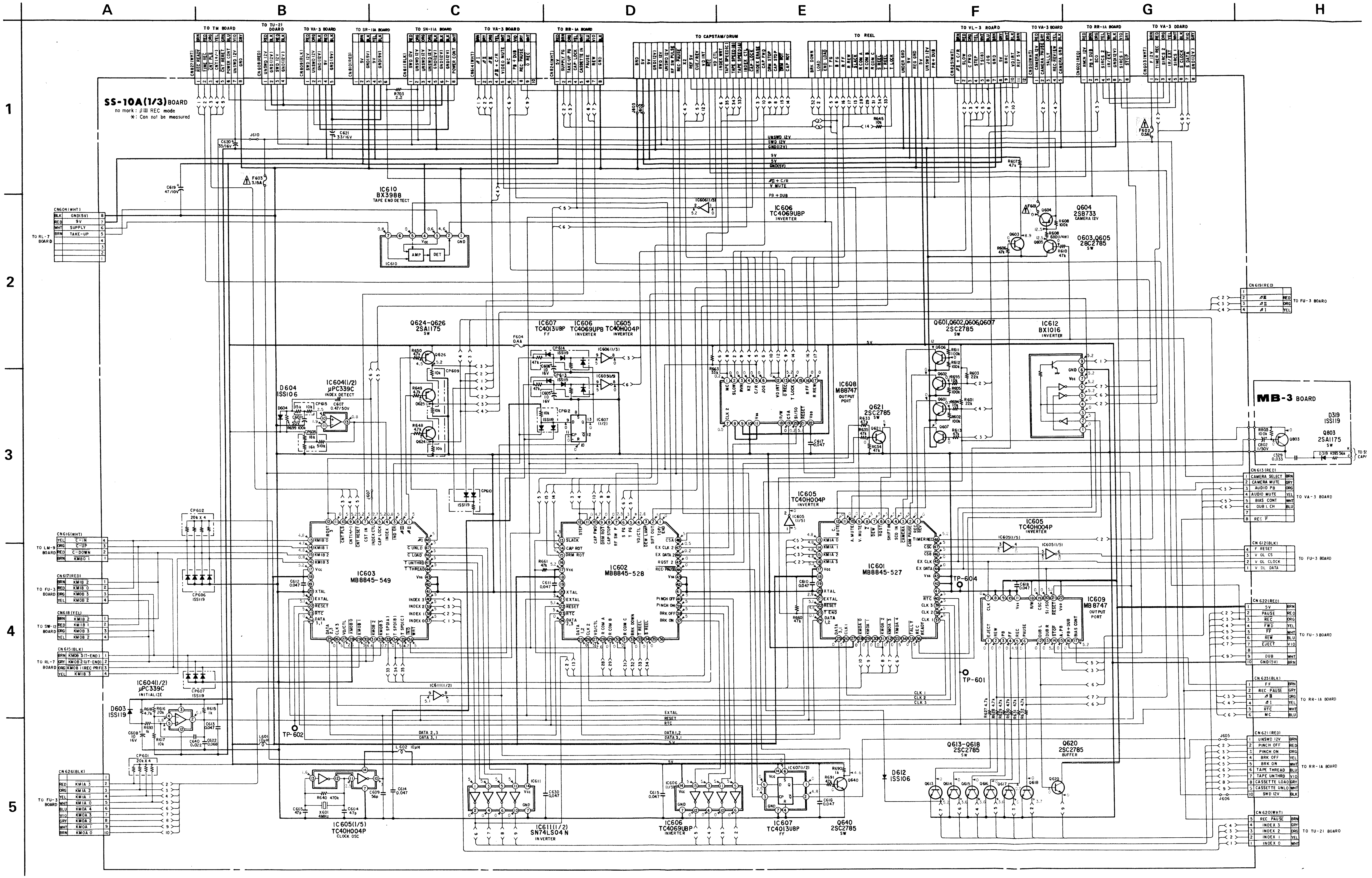

C329
R802
Q802
Q803
R805
Q801
D802
G
A
C
H
D
1-
606-231-14

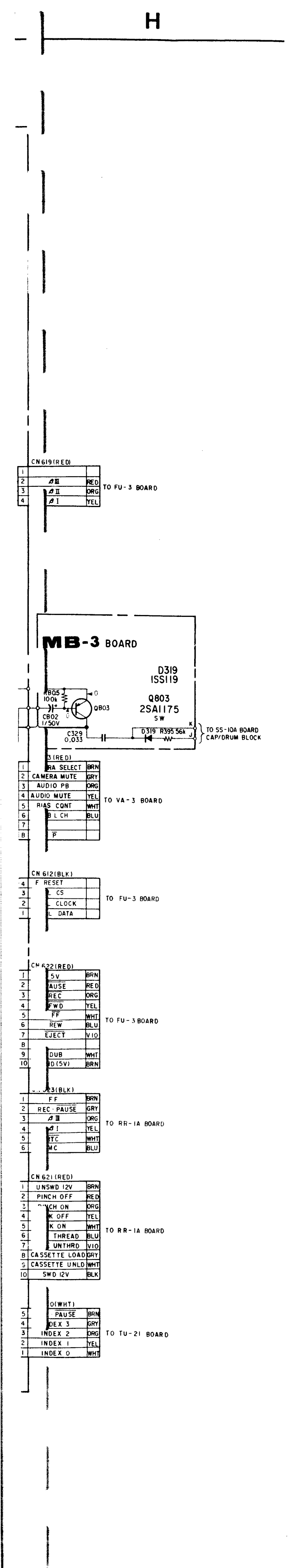


SS-10A(1/3) BOARD
(SYSTEM CONTROL)


3.4Vp-p
604kHz
IC601 ③ TAPE TOP
2.5Vp-p
604kHz
IC601 ⑦ TAPE END
4.8Vp-p
4MHz
IC605 ⑩ PIN

SS-10A (SYSTEM CONTROL) AND MB-3 (SWITCH) BOARD SCHEMATIC DIAGRAM *– Ref. No.SS-10A BOARD: 3000 series MB-3 BOARD: 4000 series –*


A
B
C
D
E
F
G
H
1
2
3
4
5
SS-10A(1/3) BOARD
no mark : βIII REC mode
✻ : Can not be measured
MB-3 BOARD
TO TM BOARD
TO TU-21 BOARD
TO VA-3 BOARD
TO SR-11A BOARD
TO SN-11A BOARD
TO RR-1A BOARD
TO CAPSTAN/DRUM
TO REEL
TO VL-3 BOARD
TO RL-7 BOARD
TO LM-9 BOARD
TO FU-3 BOARD
TO SW-12 BOARD
IC610 BX3988 TAPE END DETECT
IC606 TC4069UBP INVERTER
IC607 TC4013UBP FF
IC605 TC40H004P INVERTER
IC604(1/2) μPC339C INDEX DETECT
IC604(1/2) μPC339C INITIALIZE
IC603 MB8845-549
IC602 MB8845-528
IC601 MB8845-527
IC608 MB8747 OUTPUT PORT
IC609 MB8747 OUTPUT PORT
IC612 BX1016 INVERTER
IC611 SN74LS04N INVERTER
IC605(1/5) TC40H004P CLOCK OSC
Q604 2SB733 CAMERA 12V
Q603,Q605 2SC2785 SW
Q624-Q626 2SA1175 SW
Q601,Q602,Q606,Q607 2SC2785 SW
Q621 2SC2785 SW
Q613-Q618 2SC2785 SW
Q620 2SC2785 BUFFER
Q640 2SC2785 SW
Q803 2SA1175 SW
D319 1SS119
D604 1SS106
D603 1SS119
D612 1SS106
CP606 1SS119
CP607 1SS119
CP610 1SS119
F603 3.15A
F604 0.4A
F601
F602 0.5A
X601 4MHz
TP-601
TP-602
TP-604
CN604(WHT)
CN616(WHT)
CN617(RED)
CN618(YEL)
CN615(BLK)
CN626(BLK)
CN619(RED)
CN613(RED)
CN612(BLK)
CN622(RED)
CN623(BLK)
CN621(RED)
CN620(WHT)

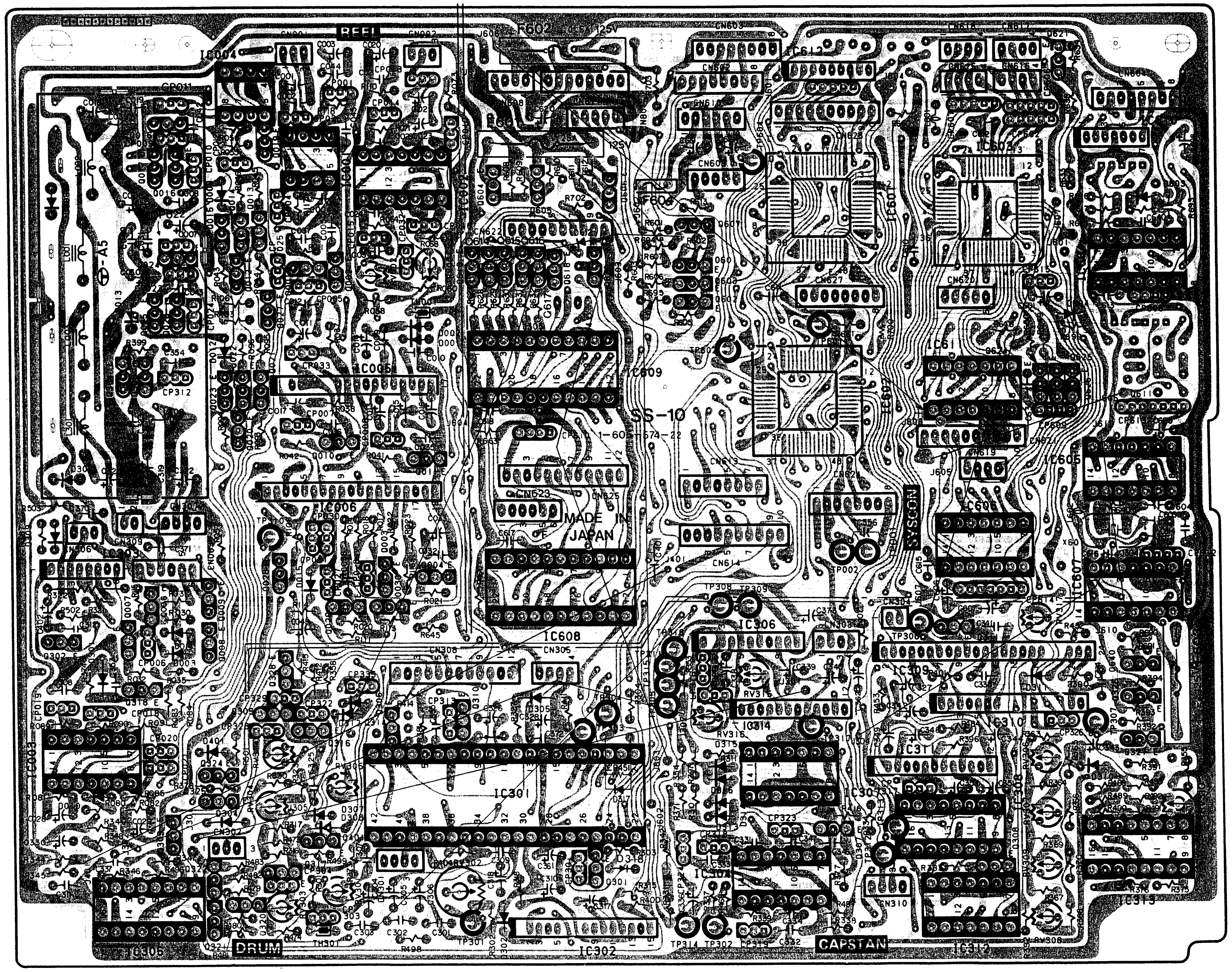

H
CN619(RED)
1
2 ØIII RED
3 ØII ORG
4 ØI YEL
TO FU-3 BOARD
MB-3 BOARD
D319
ISS119
Q803
2SA1175
SW
R805
100k
C802
1/50V
Q803
C329
0.033
D319 R395 56k
K
J
TO SS-10A BOARD
CAP/DRUM BLOCK
3(RED)
1 RA SELECT BRN
2 CAMERA MUTE GRY
3 AUDIO PB ORG
4 AUDIO MUTE YEL
5 BIAS CONT WHT
6 B L CH BLU
7
8 P
TO VA-3 BOARD
CN 612(BLK)
4 F RESET
3 L CS
2 L CLOCK
1 L DATA
TO FU-3 BOARD
CN 622(RED)
1 5V BRN
2 AUSE RED
3 REC ORG
4 FWD YEL
5 FF WHT
6 REW BLU
7 EJECT VIO
8
9 DUB WHT
10 D(5V) BRN
TO FU-3 BOARD
23(BLK)
1 FF BRN
2 REC · PAUSE GRY
3 ØIII ORG
4 ØI YEL
5 RTC WHT
6 MC BLU
TO RR-1A BOARD
CN 621(RED)
1 UNSWD 12V BRN
2 PINCH OFF RED
3 CH ON ORG
4 K OFF YEL
5 K ON WHT
6 THREAD BLU
7 UNTHRD VIO
8 CASSETTE LOAD GRY
9 CASSETTE UNLD WHT
10 SWD 12V BLK
TO RR-1A BOARD
0(WHT)
5 PAUSE BRN
4 DEX 3 GRY
3 INDEX 2 ORG
2 INDEX 1 YEL
1 INDEX 0 WHT
TO TU-21 BOARD

When indicating parts by reference number, please include the board name.

SS-10A (CAPSTAN & DRUM SERVO INDEX/REEL SERVO) PRINTED WIRING BOARD – *Ref. No.3000 series* –

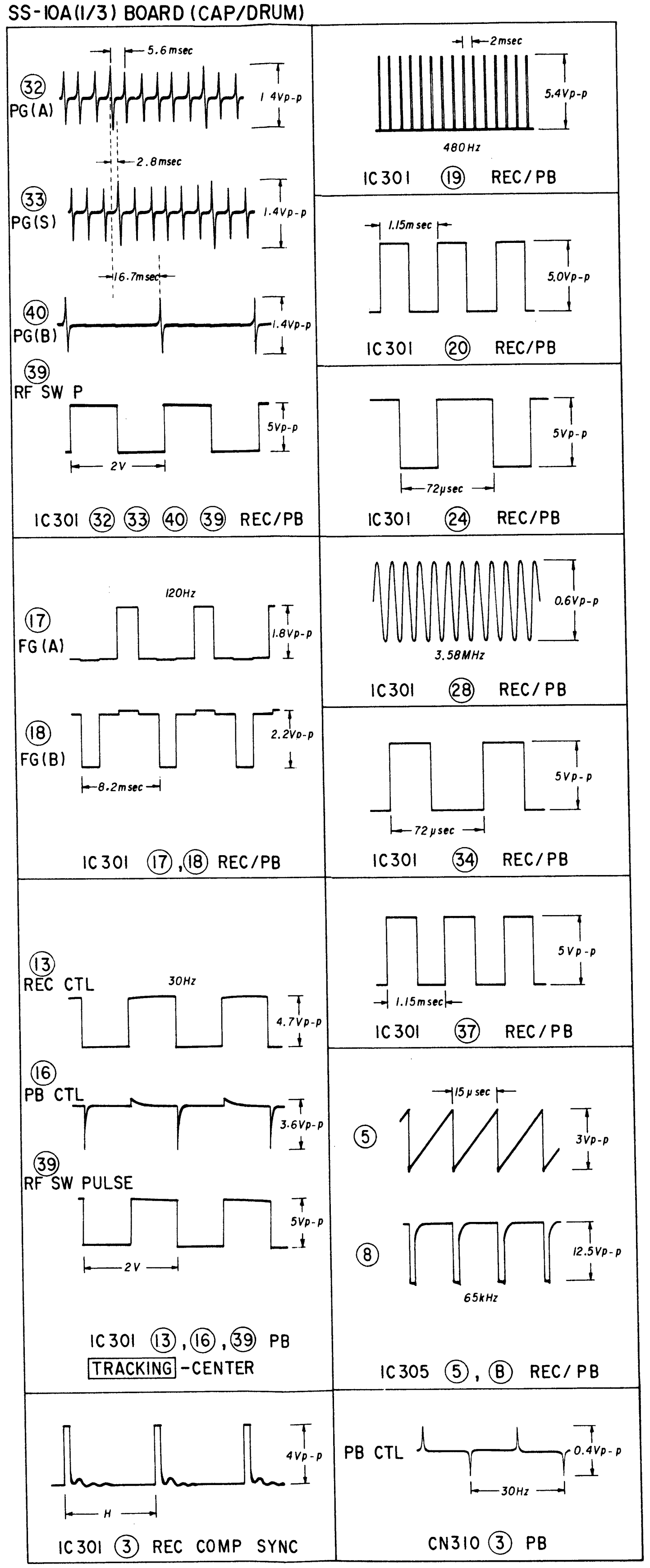
SS-10A BOARD

	A	B	C	D	E
Q, IC	016 017,018 024 025,026 304 303 IC303 007 006 302 IC003 318 325 IC305 309 322	IC004 019 IC001 015 014,013 012 001 002 022 027 021 023 IC005 009 020 028 010 011 008 IC006 003 004 324,305 328 029 315 314 030 321 320 317 401 613 IC002 310	604 605 606 614,615,616,617,618 620 607 601 603,602 IC609 IC608 301 IC301 IC302 IC304	IC612 IC601 IC602 IC611 624 IC606 311 IC306 IC314 IC309 IC311 IC307 307 IC312	IC603 621 IC604 625 626 IC610 IC605 IC310 10308 308 IC607 640 326 327 IC313
D	009 303 309 301 010 013 014 003 401	008 012 304 015 312 307 308 306 002 001	302 305 317 318 315 316 314 313		603 604 311 310
ADJ		RV314 RV304 RV303 RV305 RV301 RV002 RV001 RV302	RV315 RV316		RV317 RV306 RV307 RV309 RV308 RV310


1
2
3
4
5
REEL
IC004
F602
SS-10
1-605-574-22
MADE IN JAPAN
SYSCON
IC006
IC608
IC301
IC306
IC314
IC309
IC310
IC305
IC302
IC313
DRUM
CAPSTAN
TP301
TP302
TP314
TP308
TP309

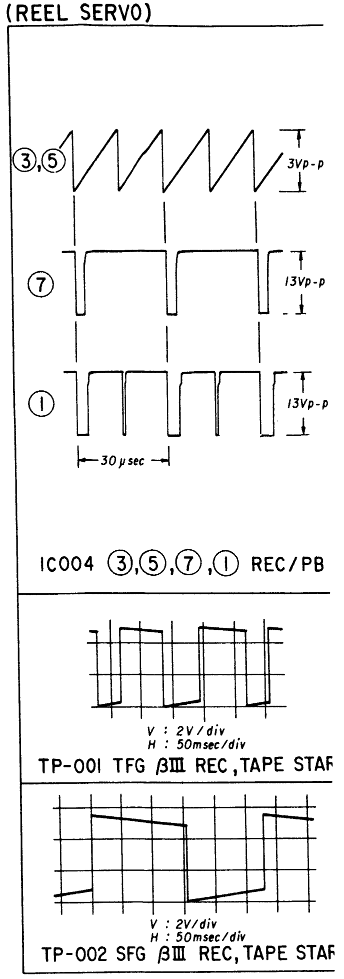
F G

SS-10A(1/3) BOARD (CAP/DRUM)



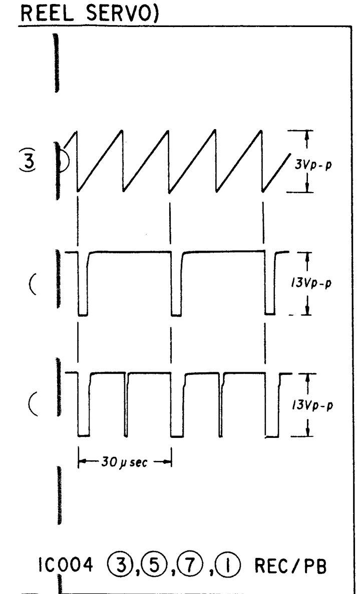
H

SS-10A(1/3) BOARD
(REEL SERVO)

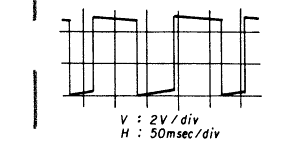


H

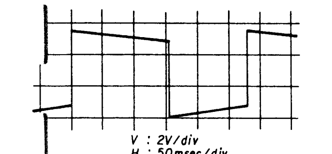
S-10A(1/3) BOARD
REEL SERVO)



IC004 ③,⑤,⑦,① REC/PB



TP-001 TFG βIII REC, TAPE START



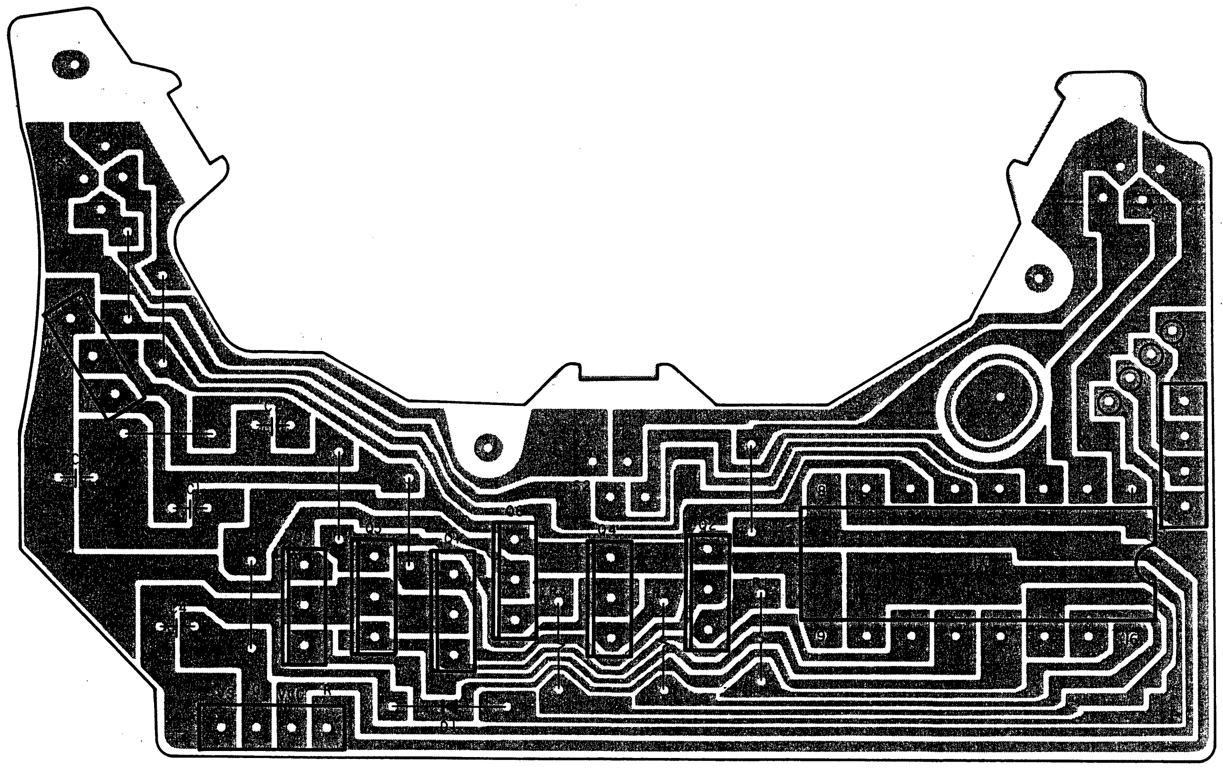
002 SFG βIII REC, TAPE START

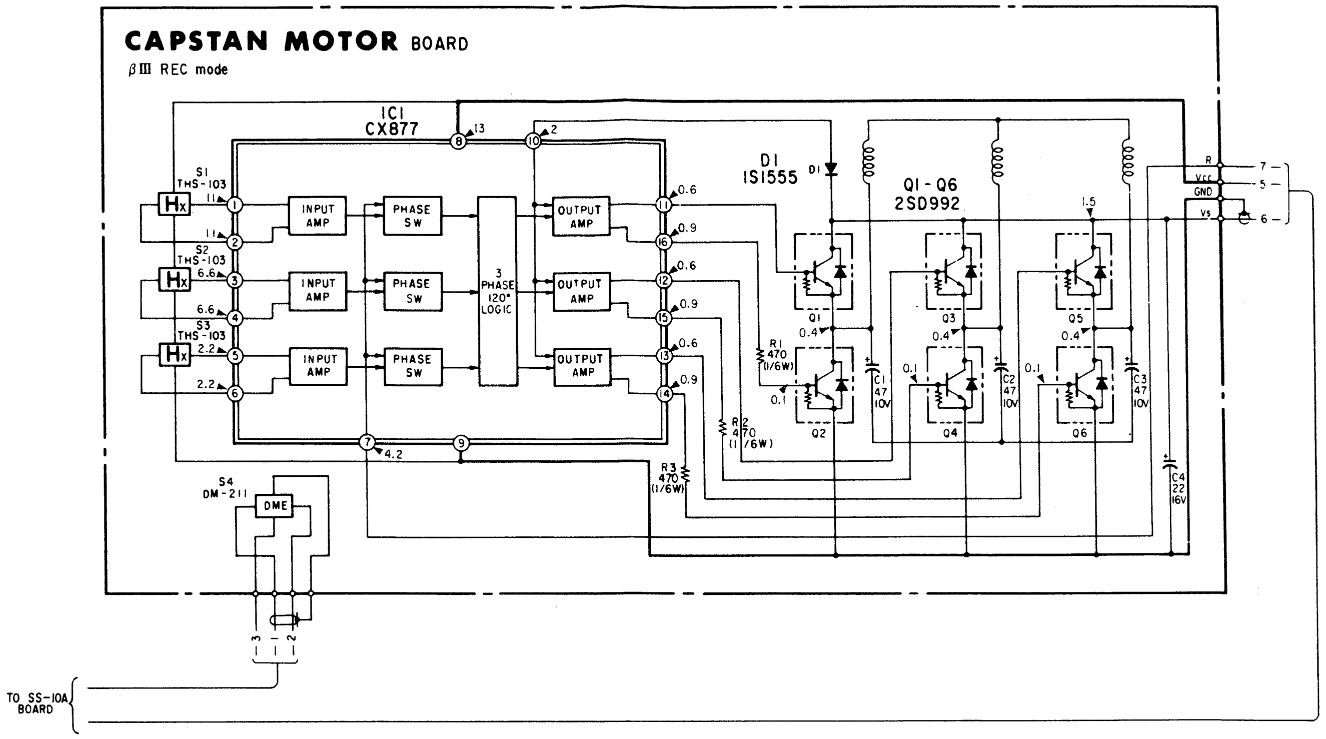
A B C D E F G

1 2 3 4 5

CAPSTAN MOTOR PRINTED WIRING BOARD & SCHEMATIC DIAGRAM

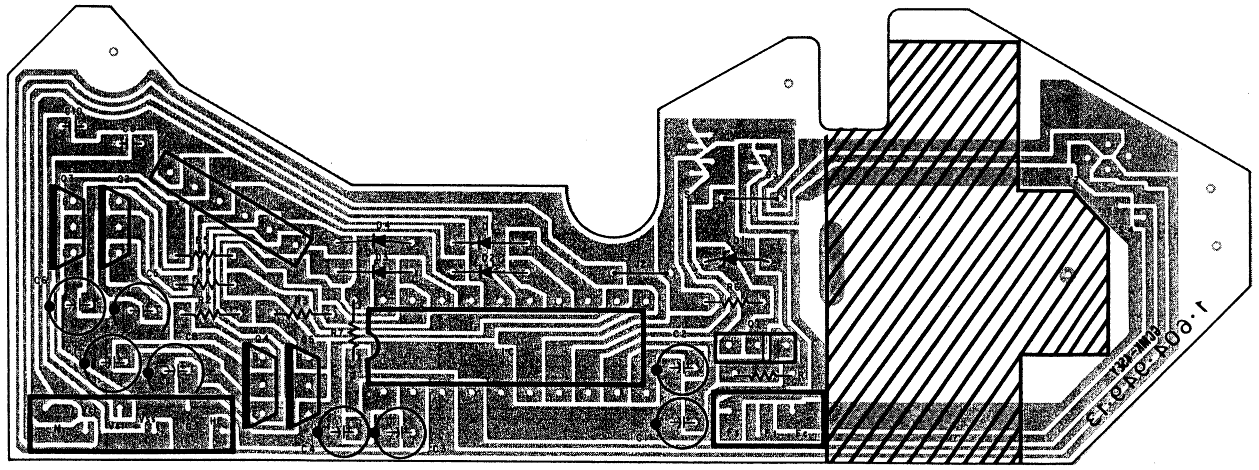
— Ref. No.5100 series —

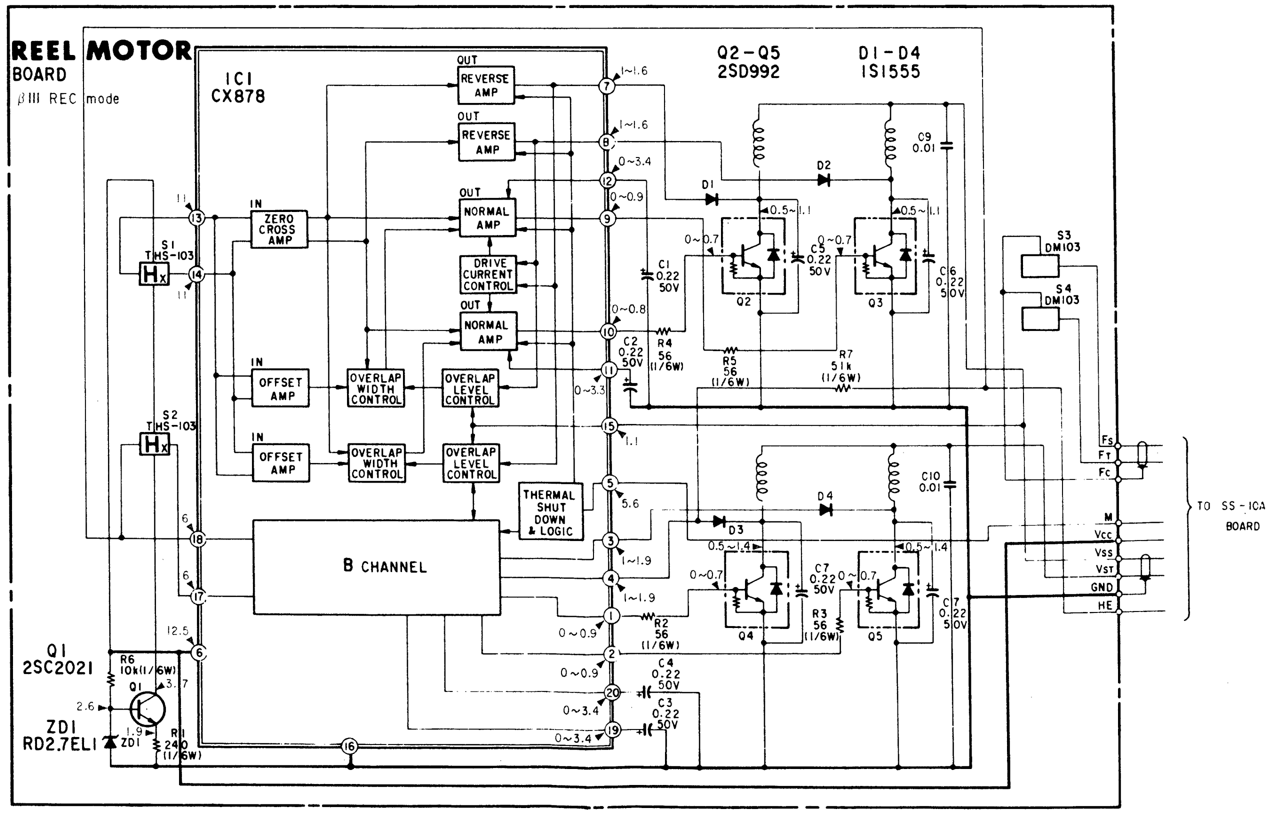



CAPSTAN MOTOR BOARD
βIII REC mode
IC1
CX877
S1
THS-103
S2
THS-103
S3
THS-103
Hx
INPUT AMP
PHASE SW
3 PHASE 120° LOGIC
OUTPUT AMP
D1
1S1555
Q1-Q6
2SD992
Q1
Q2
Q3
Q4
Q5
Q6
R1 470 (1/6W)
R2 470 (1/6W)
R3 470 (1/6W)
C1 47 10V
C2 47 10V
C3 47 10V
C4 22 16V
S4
DM-211
DME
R
Vcc
GND
Vs
7
5
6
3
1
2
TO SS-10A BOARD

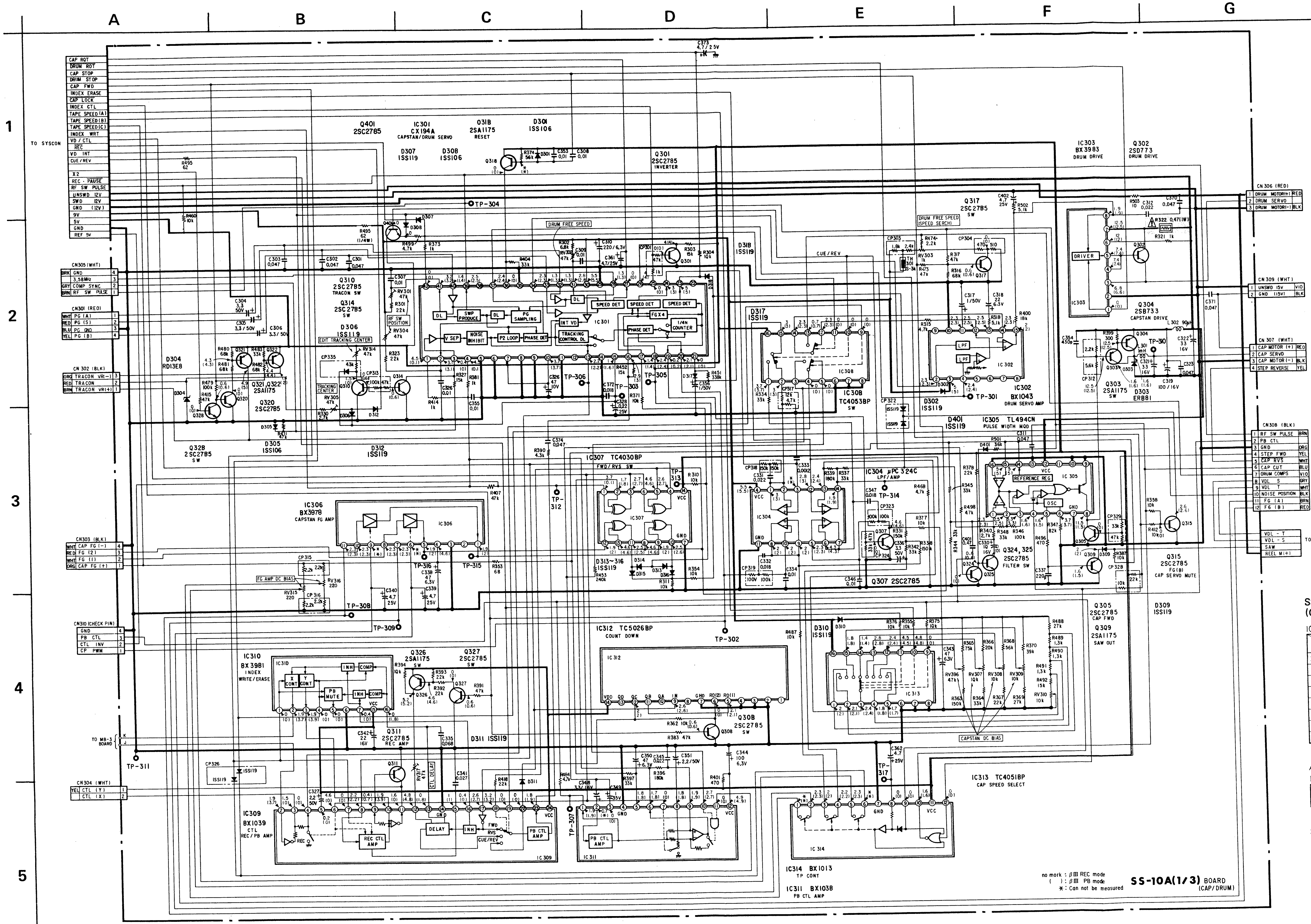
REEL MOTOR PRINTED WIRING BOARD & SCHEMATIC DIAGRAM

— Ref. No.5500 series —




REEL MOTOR BOARD
βIII REC mode
IC1
CX878
Q2-Q5
2SD992
D1-D4
1S1555
REVERSE AMP
NORMAL AMP
ZERO CROSS AMP
DRIVE CURRENT CONTROL
OFFSET AMP
OVERLAP WIDTH CONTROL
OVERLAP LEVEL CONTROL
THERMAL SHUT DOWN & LOGIC
B CHANNEL
IN
OUT
S1
THS-103
S2
THS-103
Hx
S3
DM103
S4
DM103
Q1
2SC2021
ZD1
RD2.7EL1
R6 10k(1/6W)
R1 240 (1/6W)
R2 56 (1/6W)
R3 56 (1/6W)
R4 56 (1/6W)
R5 56 (1/6W)
R7 51k (1/6W)
C1 0.22 50V
C2 0.22 50V
C3 0.22 50V
C4 0.22 50V
C5 0.22 50V
C6 0.22 50V
C7 0.22 50V
C9 0.01
C10 0.01
Fs
FT
Fc
M
Vcc
Vss
VST
GND
HE
TO SS-10A BOARD

SS-10A (CAPSTAN & DRUM SERVO INDEX/REEL SERVO) BOARD SCHEMATIC DIAGRAM *– Ref. No.3000 series –*


A
B
C
D
E
F
G
1
2
3
4
5
TO SYSCON
CAP ROT
DRUM ROT
CAP STOP
DRUM STOP
CAP FWD
INDEX ERASE
CAP LOCK
INDEX CTL
TAPE SPEED (A)
TAPE SPEED (B)
TAPE SPEED (C)
INDEX WRT
VD / CTL
REC
VD INT
CUE / REV
X2
REC · PAUSE
RF SW PULSE
UNSWD 12V
SWD 12V
GND (12V)
9V
5V
GND
REF 5V
CN305 (WHT)
CN301 (RED)
CN 302 (BLK)
CN303 (BLK)
CN310 (CHECK PIN)
CN304 (WHT)
TO MB-3 BOARD
Q401 2SC2785
IC301 CX194A CAPSTAN/DRUM SERVO
Q318 2SA1175 RESET
D301 1SS106
D307 1SS119
D308 1SS106
Q301 2SC2785 INVERTER
Q310 2SC2785 TRACON SW
Q314 2SC2785 SW
D306 1SS119
EDIT TRACKING CENTER
TRACKING CENTER
D304 RD13E8
Q320 2SA1175
Q321, Q322 2SA1175
Q328 2SC2785 SW
D305 1SS106
D312 1SS119
DRUM FREE SPEED
D318 1SS119
CUE/REV
D317 1SS119
IC308 TC4053BP SW
D302 1SS119
D401 1SS119
IC302 BX1043 DRUM SERVO AMP
Q317 2SC2785 SW
DRUM FREE SPEED (SPEED SERCH)
IC303 BX3983 DRUM DRIVE
Q302 2SD773 DRUM DRIVE
DRIVER
Q304 2SB733 CAPSTAN DRIVE
Q303 2SA1175 SW
D303 ERB81
CN306 (RED)
DRUM MOTOR(+)
DRUM SERVO
DRUM MOTOR(-)
CN309 (WHT)
UNSWD 15V
GND (15V)
CN307 (WHT)
CAP MOTOR (+)
CAP SERVO
CAP MOTOR (-)
STEP REVERSE
CN308 (BLK)
RF SW PULSE
PB CTL
GND
STEP FWD
CAP RVS
CAP CUT
DRUM COMPS
VDL S
VDL T
NOISE POSITION
FG (A)
FG (B)
VDL - T
VDL - S
SAW
REEL M(+)
TO REEL
IC306 BX3978 CAPSTAN FG AMP
FG AMP DC BIAS
IC307 TC4030BP FWD/RVS SW
D313~316 1SS119
IC304 μPC324C LPF/AMP
Q307 2SC2785
IC305 TL494CN PULSE WIDTH MOD
REFERENCE REG
OSC
Q324, 325 2SC2785 FILTER SW
Q315 2SC2785 FG(B) CAP SERVO MUTE
Q305 2SC2785 CAP FWD
Q309 2SA1175 SAW OUT
D309 1SS119
IC310 BX3981 INDEX WRITE/ERASE
Q326 2SA1175 SW
Q327 2SC2785 SW
IC312 TC5026BP COUNT DOWN
Q308 2SC2785 SW
D310 1SS119
IC313 TC4051BP CAP SPEED SELECT
CAPSTAN DC BIAS
Q311 2SC2785 REC AMP
D311 1SS119
IC309 BX1039 CTL REC/PB AMP
DELAY
REC CTL AMP
PB CTL AMP
CUE/REV
IC311 BX1038 PB CTL AMP
IC314 BX1013 TP CONT
TP-301
TP-302
TP-303
TP-304
TP-305
TP-306
TP-307
TP-308
TP-309
TP-310
TP-311
TP-312
TP-313
TP-314
TP-315
TP-316
TP-317
no mark : βIII REC mode
( ) : βIII PB mode
✱ : Can not be measured
SS-10A(1/3) BOARD (CAP/DRUM)

SS-10A (1/3) BOARD
(CAPSTAN/DRUM SERVO)

IC313

PIN / MODE	1	2	3	4	5	6	7	8
X2 (βII)/βI	2	2.1	2.8	1.8	1.7	GND	GND	GN
X2 (βIII)	2	2.1	1.4	1.8	1.7			
βII	2	2.1	1.8	1.8	1.7			
βIII	2	2.1	2.4	1.8	1.7			
CUE (βII)	2	2.1	2	1.8	1.7			
CUE (βIII)	2	2.1	1.8	1.8	1.7			
REV (βII)	2	2.1	2.1	1.8	1.7			
REV (βIII)	2	2.1	1.9	1.8	1.7			

βIII REVERSE (X1) MODE

IC307

PIN	1	2	3	4	5	6	7	
VOLTAGE	0.1	1.9	2.7	2.7	0.1	2.7	GND	0

SS-10A (1/3) BOARD
(REEL SERVO)

IC006

MODE / PIN	FWD/ VIDEOLA (FWD)	VIDEOLA (REVERSE)	FF
1	0	0	0
2	0	0	5
3	0	5	0

E ARD
)RUM SERVO)

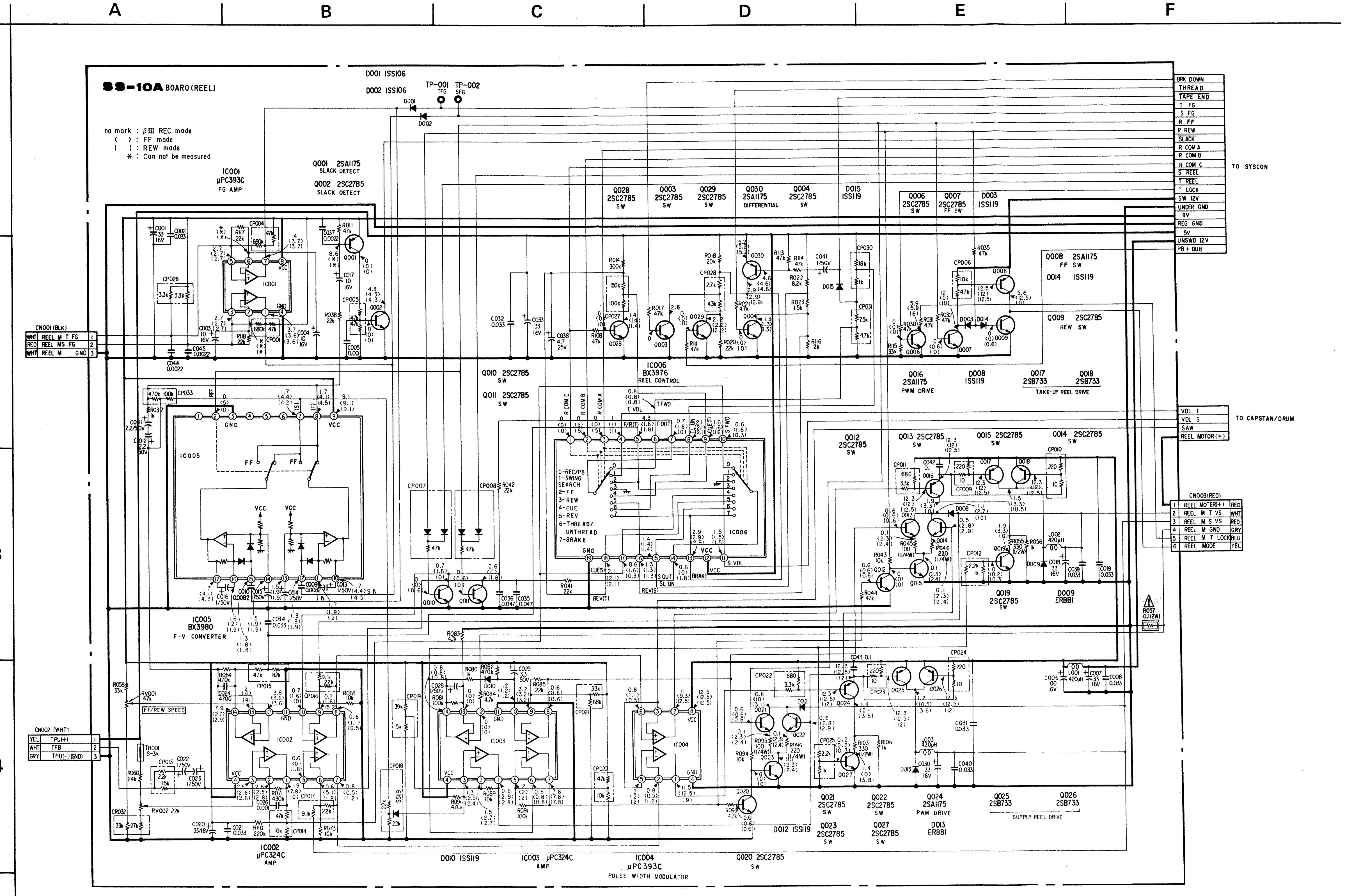
2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
2.	2.8	1.8	1.7	GND	GND	GND	0	0	0	2.5	2.8	1.4	1.8	5.5
2.1	1.4	1.8	1.7				0	0	4.5	2.5	2.8	1.4	1.8	5.5
2.1	1.8	1.8	1.7				0	4.8	0	2.5	2.8	1.4	1.8	5.5
2.	2.4	1.8	1.7				0	4.8	4.5	2.4	2.8	1.4	1.8	5.5
2.	2	1.8	1.7				4.8	0	0	2.5	2.8	1.4	1.8	5.5
2.1	1.8	1.8	1.7				4.8	0	4.5	2.5	2.8	1.4	1.8	5.5
2.1	2.1	1.8	1.7				4.8	4.8	0	2.5	2.8	1.4	1.8	5.5
2.1	1.9	1.8	1.7				4.8	4.8	4.5	2.5	2.8	1.4	1.8	5.5

: (..) MODE

2	3	4	5	6	7	8	9	10	11	12	13	14
1.	2.7	2.7	0.1	2.7	GND	0.1	2	2.4	2.4	2	0	5.2

BOARD
/O)

WD LA	WD)	VIDEOLA (REVERSE)	FF	REW	CUE	REV	THREADING/ UNTHREADING	E-E
0		0	0	0	5	5	5	5
0		0	5	5	0	0	5	5
0		5	0	5	0	5	0	5/0


A
B
C
D
E
F
1
2
3
4
SS-10A BOARO (REEL)
na mark : βIII REC made
( ) : FF made
( ) : REW made
* : Can nat be measured
D001 ISS106
D002 ISS106
TP-001 TFG
TP-002 SFG
IC001 μPC393C FG AMP
Q001 2SA1175 SLACK DETECT
Q002 2SC2785 SLACK OETECT
Q028 2SC2785 SW
Q003 2SC2785 SW
Q029 2SC2785 SW
Q030 2SA1175 DIFFERENTIAL
Q004 2SC2785 SW
D015 ISS119
Q006 2SC2785 SW
Q007 2SC2785 FF SW
D003 ISS119
Q008 2SA1175 FF SW
D014 ISS119
Q009 2SC2785 REW SW
CN001 (BLK)
WHT REEL M T FG 1
RED REEL MS FG 2
WHT REEL M GND 3
Q010 2SC2785 SW
Q011 2SC2785 SW
IC006 BX3976 REEL CONTROL
Q016 2SA1175 PWM DRIVE
D008 ISS119
Q017 2SB733
Q018 2SB733
TAKE-UP REEL DRIVE
IC005
0-REC/PB
1-SWING SEARCH
2-FF
3-REW
4-CUE
5-REV
6-THREAD/ UNTHREAD
7-BRAKE
Q012 2SC2785 SW
Q013 2SC2785 SW
Q015 2SC2785 SW
Q014 2SC2785 SW
Q019 2SC2785 SW
D009 ERB81
IC005 BX3980 F-V CONVERTER
FF/REW SPEED
CN002 (WHT)
YEL TPU(+) 1
WHT TFB 2
GRY TPU(-)(GND) 3
TH001 S-3k
IC002 μPC324C AMP
IC003
IC004
D010 ISS119
IC003 μPC324C AMP
IC004 μPC393C PULSE WIDTH MODULATOR
Q020 2SC2785 SW
D012 ISS119
Q021 2SC2785 SW
Q022 2SC2785 SW
Q023 2SC2785 SW
Q027 2SC2785 SW
Q024 2SA1175 PWM DRIVE
D013 ERB81
Q025 2SB733
Q026 2SB733
SUPPLY REEL DRIVE
BRK DOWN
THREAD
TAPE END
T FG
S FG
R FF
R REW
SLACK
R COM A
R COM B
R COM C
S REEL
T REEL
T LOCK
SW 12V
UNDER GND
9V
REG GND
5V
UNSWD 12V
PB + DUB
TO SYSCON
VDL T
VDL S
SAW
REEL MOTOR(+)
TO CAPSTAN/DRUM
CN003(RED)
1 REEL MOTER(+) RED
2 REEL M T VS WHT
3 REEL M S VS RED
4 REEL M GND GRY
5 REEL M T LOCK BLU
6 REEL MODE YEL
R057 0.1(2W)

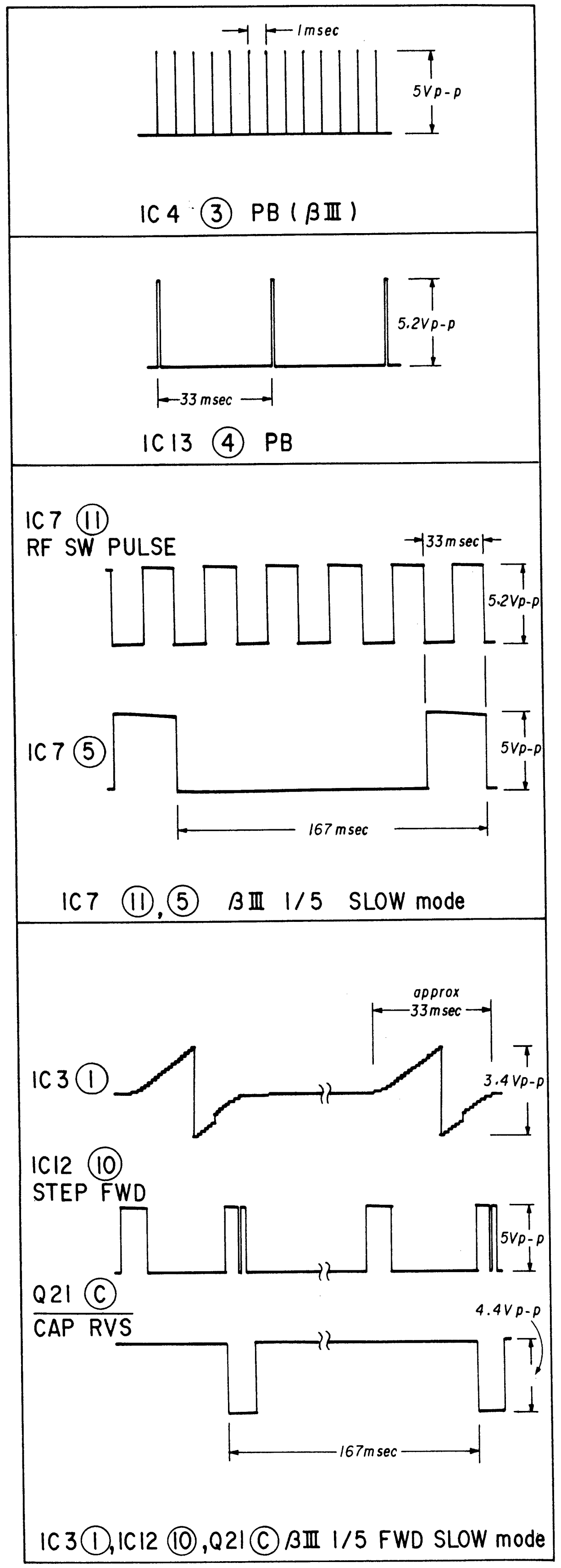
5

When indicating parts by reference number, please include the board name.

VL-3 (SLOW SERVO) PRINTED WIRING BOARD – *Ref. No.6000 series* –

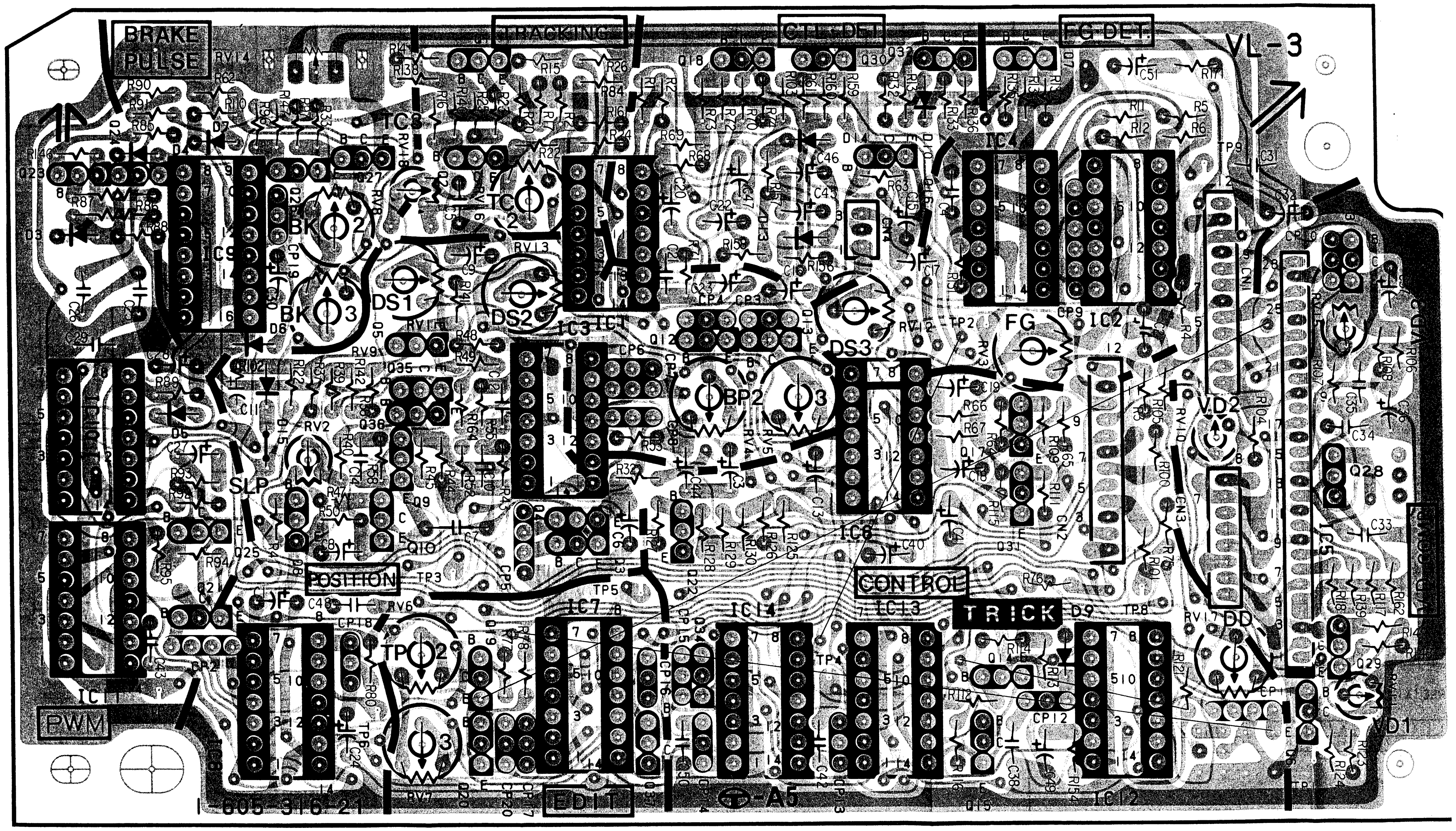
A
B
C
D
E
F
G
H
1
2
3
4
5

VL-3 BOARD



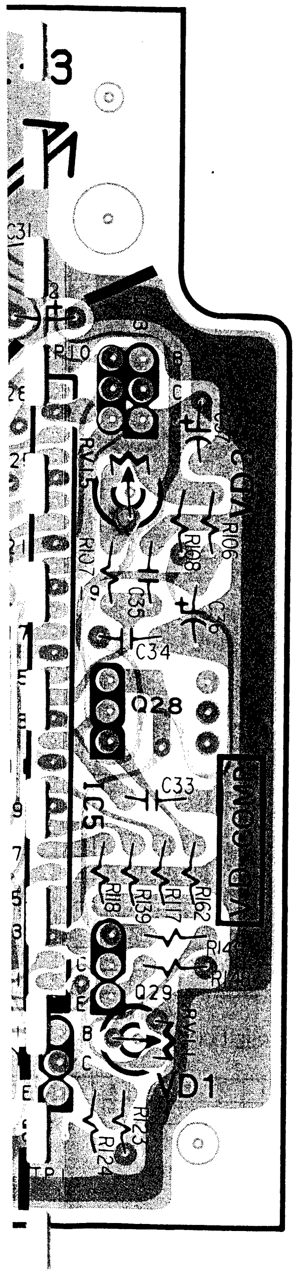
VL-3 BOARD

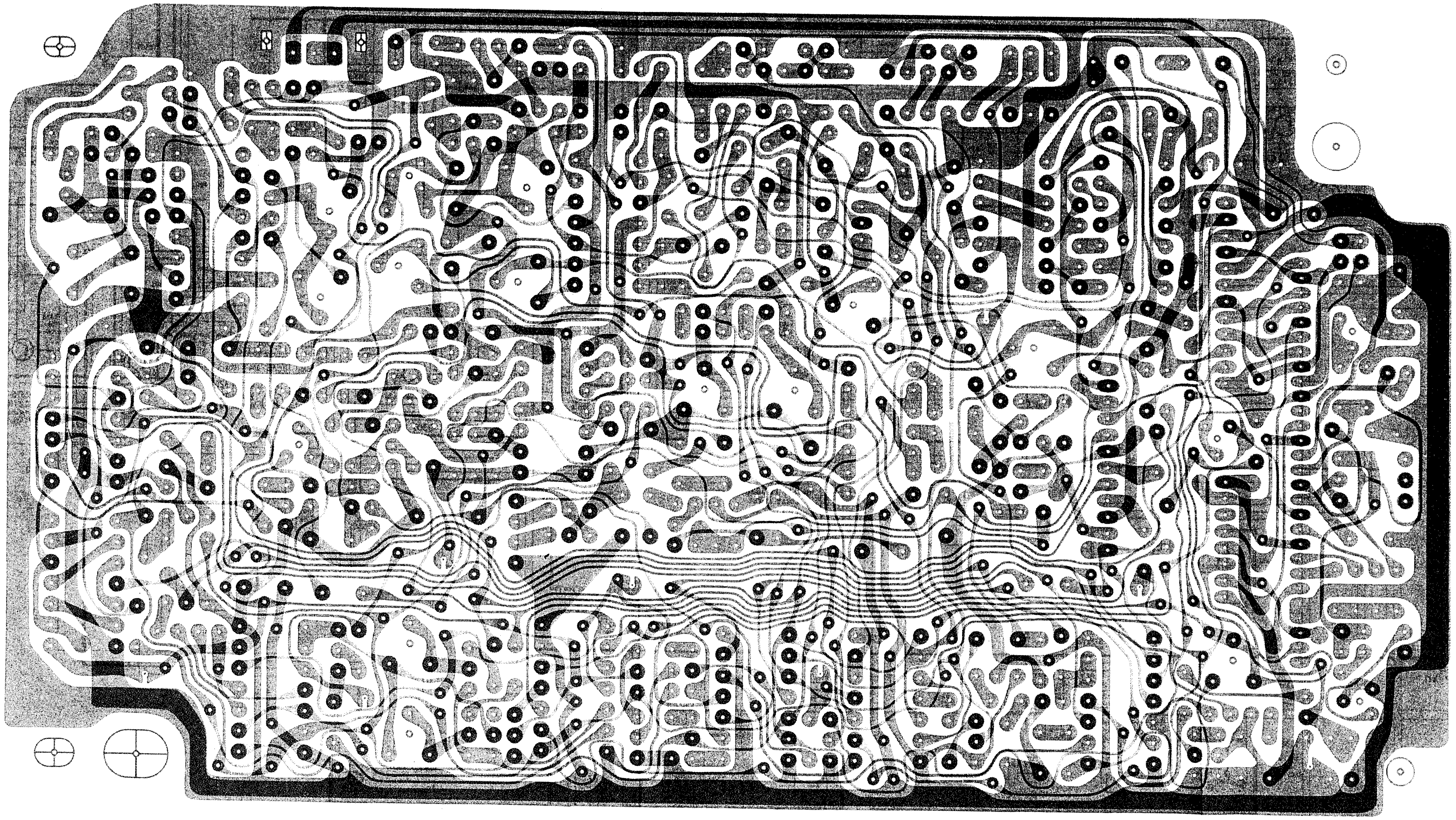
	C	D	E	F	G	H
Q, IC	23, 24, IC10, IC11, 21	IC9, 26, 27, 5, 36, 35, 25, 8, 10, 9, IC8	2, 1, IC1, 20, 19, IC3, 3, 4, IC7, 37, 22	18, 12, 13, 30, 16, 32, 34, IC14, IC6, IC13	7, IC4, IC2, 31, 17, 15, 14, IC12	33, 28, 29, IC5, 6
D	3, 4, 5	7, 6, 15		13, 14, 10	9	
ADJ		RV14, RV2, RV9, RV8, RV1, RV18, RV6, RV7	RV13, RV16	RV4, RV5, RV12	RV3	RV10, RV17, RV15, RV11


VL-3
BRAKE PULSE
PACKING
CTL DET
FG DET
TC1
TC2
BK2
BK3
DS1
DS2
DS3
FG
BP2
VD2
SLP
POSITION
CONTROL
TRICK
TP2
DD
VD1
PWM
EDIT
A5
IC1
IC2
IC3
IC4
IC5
IC6
IC7
IC8
IC9
IC10
IC11
IC12
IC13
IC14
CN1
CN2
CN3
TP1
TP3
TP4
TP5
TP6
TP8
1-605-316-21

H	I

33 28 6 29	Q , IC
	D
RV15 7 RV11	ADJ


3
C31
R10
RV15
R106
R108
R107
C35
C36
C34
Q28
C33
IC5
R118
R139
R117
R162
Q29
RV11
B
C
E
VD1
R123
R124
TP1
VD0 C01



VL-3 (SLOW SERVO) BOARD SCHEMATIC DIAGRAM

– Ref. No.6000 series –

VL-3 BOARD
βⅢ XI REVERSE MODE

IC \ PIN	1	2	3	4	5	6	7	8	9	10	11	12	13	14
IC3	1.6	0.3	2.9	5.2	1.7	3.3	0	2.4	1.6	1.3	GND	1.6	1.1	2.5
IC6	2.4	2.4	2.4	0.9	0	0	GND	0	0	0	0	5.2	5.2	5.2
IC8	5.2	5.2	5.2	0	0	0	GND	0	0	0	0	5.2	0	5.2
IC12	0	5.2	0	0	0	0	GND	0	0	0	0	0	5.2	5.2
IC13	0.6	0	5.2	0.2	4	4	GND	5.2	0	5.2	5.2	0	0	5.2
IC14	0	5.2	2.5	2.6	0.6	5.2	GND	5.1	0	0	5.1	5.2	0.1	5.2

PIN	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28
IC5	3.6	3.2	5.2	2.9	—	2.6	0.3	0	5	0	0	0.1	2.6	0	5.2	GND	0.2	0	GND	0	0.6	2.9	3.3	3	4.5	0	1.9	4.6

0	3	4	14	15	21	28	29	36
B.	0	0	4.6	4.6	0.6	3.7	3.7	4.5
C	2.4	2.9	1.8	1.7	0	1.9	4.2	2.9
E	2.9	2.4	5.2	5.2	GND	3.7	4.2	5.2

VL-3 BOARD
βⅢ CUE/REV MODE
IC5

MODE \ PIN	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28
CUE	3.6	3.2	5.2	0/3	3.1	2.7	0.3	0	0	0	5.2	4.6	2.6	4.7	5.2	GND	4.2	0.8	GND	0	0.6	3	3.4	4.7	3.1	0	2.1	4.6
REV	3.6	3.2	5.2	0/3	3.1	2.7	0.3	0	5	0	5.2	0	2.6	4.7	5.2	GND	4.2	0.8	GND	0	0.6	3	3.4	4.7	3.2	0	2.1	4.6

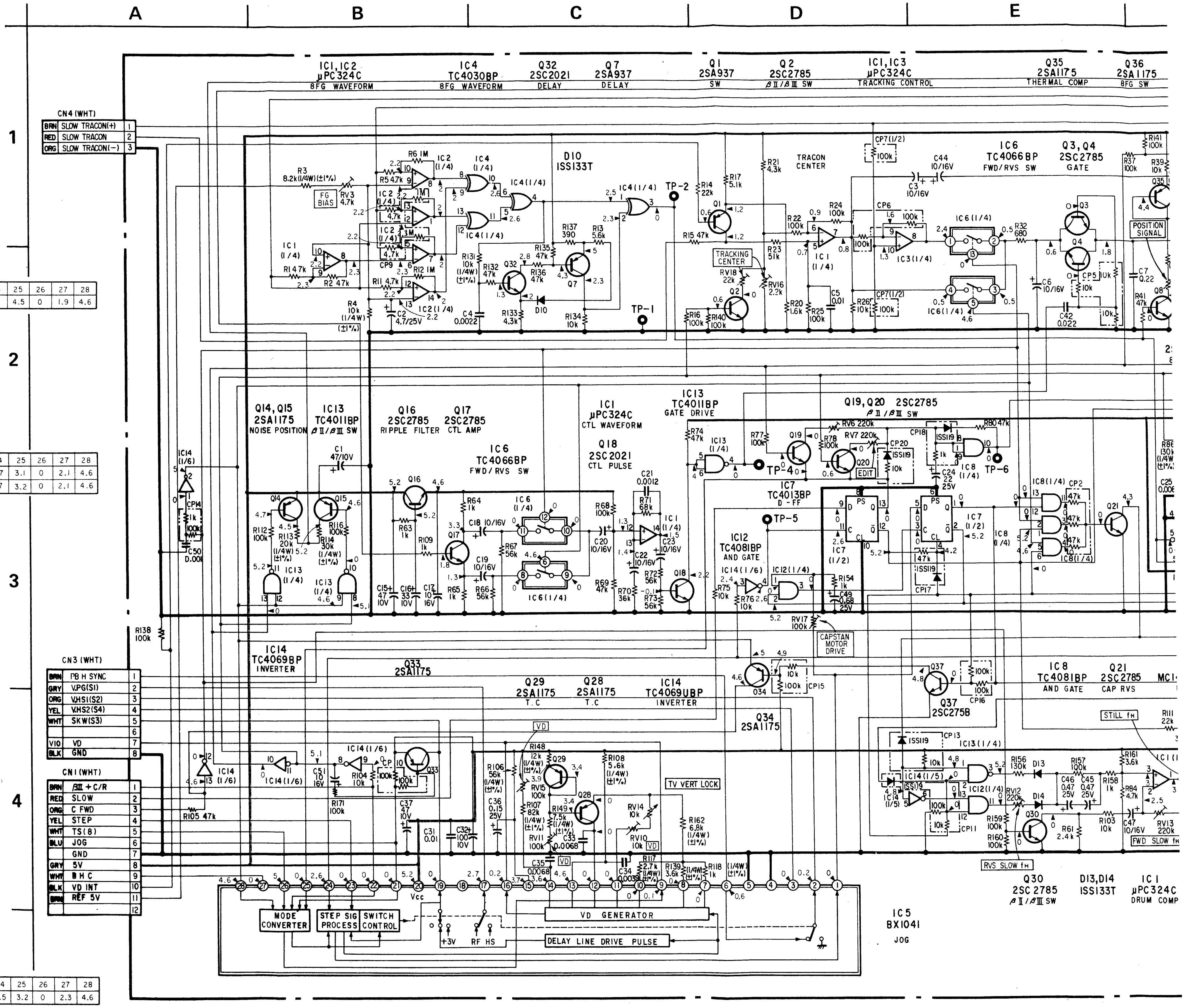
Q \ MODE	Q28			Q29		
	B	C	E	B	C	E
CUE	3.7	2.1	3.8	3.7	3.7	4.2
REV	3.7	2.1	3.8	3.7	3.7	4.2

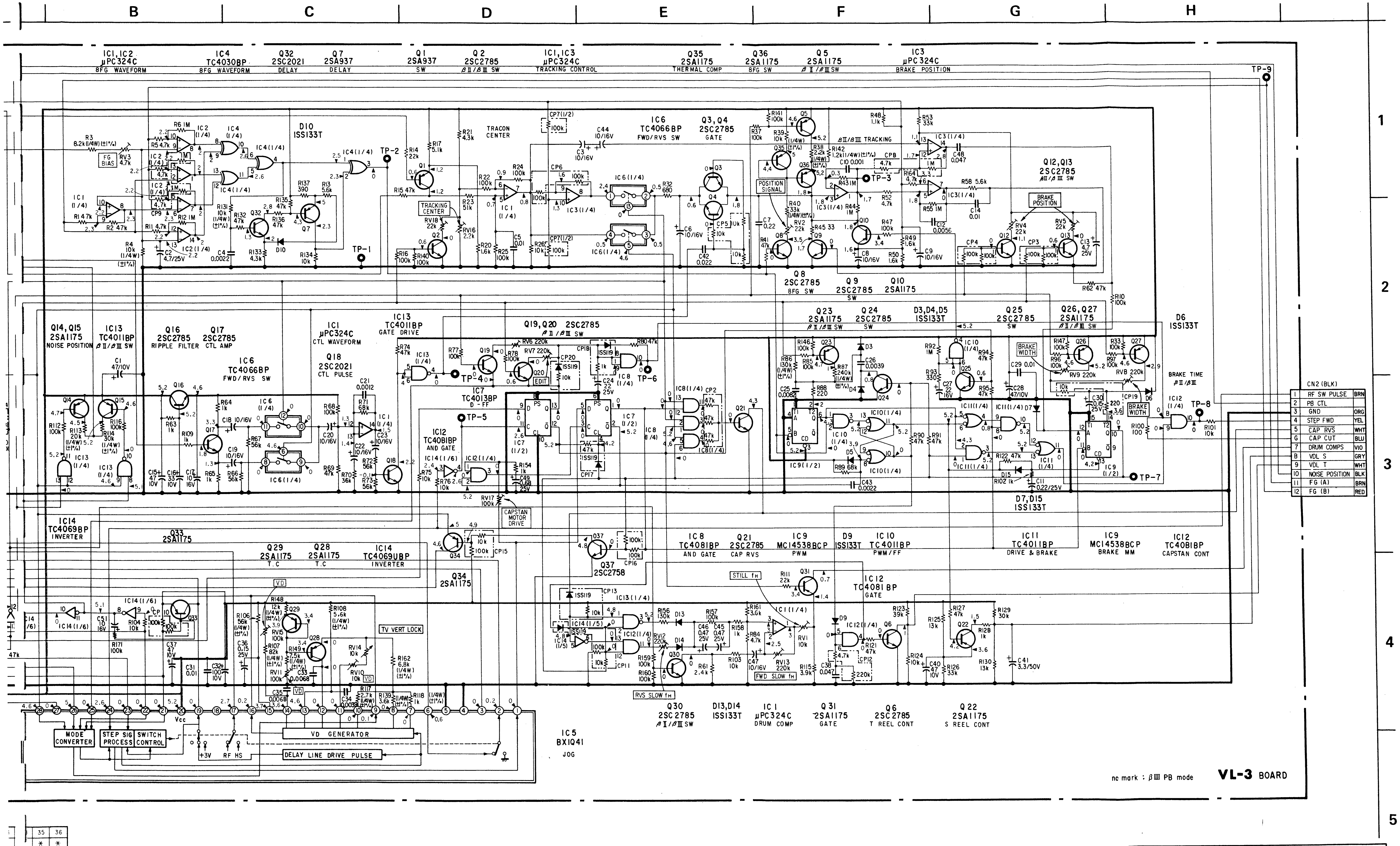
VL-3 BOARD
βⅢ 1/5 FWD SLOW MODE

IC \ PIN	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
IC1	3	2.3	3	5.2	0.7	0.9	0.8	*	2.3	2.2	GND	1.2	1.4	1.4		
IC2	*	1.8	*	5.2	2.4	2.7	*	*	2.2	2.4	GND	1.7	2.2	*		
IC3	1.5	*	0.4	GND	1.5	3.3	0	2.4	1.6	1.3	GND	1.6	1.1	3.7		
IC4	*	*	0	*	*	*	GND	*	0.4	*	*	*	*	5.2		
IC6	2.4	0.8	0.8	0.8	4.6	4.6	GND	0	0	0	0	0	0	5.2		
IC7	0.9	4.3	0	0.2	1	0	GND	0	5	0	2.6	0	5.2	5.2		
IC8	0	0	0	0.2	4.6	0.2	GND	4.6	4.6	5	0	0	0.9	5.2		
IC9	GND	3.2	5.2	GND	0	0.9	4.3	0	5	0.2	0.9	*	3.8	3.7	GND	5.2
IC10	1	0	5.2	5.2	0	0	GND	3.9	5	0.2	5	0.2	5.2	5.2		
IC11	0.2	0.9	5	4.4	0.9	5	GND	0.9	4.4	5	0.4	5	5	5.2		
IC12	0.7	4.3	0	0.4	0.3	0.3	GND	5	0.4	0.4	0	0.8	0.2	5.2		
IC13	4.6	0.8	4.3	0	4.2	4.2	GND	5.2	4.6	0	5.2	4.6	0	5.2		
IC14	5	0	2.5	2.6	4.6	0.2	GND	5.1	0	0	5.1	0	4.6	5.2		

IC \ PIN	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28
IC5	3.6	3.1	5.2	1.8	3	0.6	0.3	1	5	5	0	4.6	2.6	0	5.2	GND	0.2	0	GND	1	0.6	3.8	3.8	3.5	3.2	0	2.3	4.6

Q	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36
B	4.6	0.6	0	0	4.6	0	*	0	0	3.4		0	0.6	4.6	4.6	5.2	1.8	0	0	3.4	0	4.2	4.7	0	0.1	4.6	4.7	3.7	3.8	0	0.6	*			*	*
C	1.2	0	0.8	0.4	5.2	0.9	*	*	0.5	0.4		1.1	0	4.5	5.2	5.2	3.3	4.2	2.3	4.6	4.1	1.8	1.6	0.1	0	5.2	2.9	2.3	3.8	0	1.1	*			*	0.4
E	1.2	GND	0.4	0.8	5.2	GND	5	GND	GND	1.6		GND	GND	5.2	5.2	4.6	1.3	GND	5.2	5.2	GND	3.3	5.2	GND	GND	5.2	5.2	3.8	4.2	GND	1.2	2			5	5.2


A
B
C
D
E
1
2
3
4
IC1,IC2 μPC324C 8FG WAVEFORM
IC4 TC4030BP 8FG WAVEFORM
Q32 2SC2021 DELAY
Q7 2SA937 DELAY
Q1 2SA937 SW
Q2 2SC2785 βⅡ/βⅢ SW
IC1,IC3 μPC324C TRACKING CONTROL
Q35 2SA1175 THERMAL COMP
Q36 2SA1175 8FG SW
CN4 (WHT)
BRN SLOW TRACON(+) 1
RED SLOW TRACON 2
ORG SLOW TRACON(−) 3
FG BIAS
D10 1SS133T
TP-1
TP-2
TRACKING CENTER
TRACON CENTER
IC6 TC4066BP FWD/RVS SW
Q3,Q4 2SC2785 GATE
POSITION SIGNAL
Q14,Q15 2SA1175 NOISE POSITION
IC13 TC4011BP βⅡ/βⅢ SW
Q16 2SC2785 RIPPLE FILTER
Q17 2SC2785 CTL AMP
IC1 μPC324C CTL WAVEFORM
Q18 2SC2021 CTL PULSE
IC13 TC4011BP GATE DRIVE
Q19,Q20 2SC2785 βⅡ/βⅢ SW
IC6 TC4066BP FWD/RVS SW
TP-4
TP-5
TP-6
EDIT
IC7 TC4013BP D-FF
IC12 TC4081BP AND GATE
CAPSTAN MOTOR DRIVE
IC14 TC4069BP INVERTER
Q33 2SA1175
Q29 2SA1175 T.C
Q28 2SA1175 T.C
IC14 TC4069UBP INVERTER
Q34 2SA1175
Q37 2SC275B
IC8 TC4081BP AND GATE
Q21 2SC2785 CAP RVS
STILL fH
TV VERT LOCK
VD
CN3 (WHT)
BRN PB H SYNC 1
GRY V.PG(S1) 2
ORG V.HS1(S2) 3
YEL V.HS2(S4) 4
WHT SKW(S3) 5
6
VIO VD 7
BLK GND 8
CN1 (WHT)
BRN βⅢ+C/R 1
RED SLOW 2
ORG C FWD 3
YEL STEP 4
WHT TS(8) 5
BLU JOG 6
GND 7
GRY 5V 8
WHT B H C 9
BLK VD INT 10
BRN REF 5V 11
12
MODE CONVERTER
STEP SIG PROCESS
SWITCH CONTROL
VD GENERATOR
DELAY LINE DRIVE PULSE
+3V
RF HS
Vcc
IC5 BX1041 JOG
RVS SLOW fH
FWD SLOW fH
Q30 2SC2785 βⅡ/βⅢ SW
D13,D14 1SS133T
IC1 μPC324C DRUM COMP


B
C
D
E
F
G
H
1
2
3
4
5
IC1, IC2 µPC324C 8FG WAVEFORM
IC4 TC4030BP 8FG WAVEFORM
Q32 2SC2021 DELAY
Q7 2SA937 DELAY
Q1 2SA937 SW
Q2 2SC2785 βII/βIII SW
IC1, IC3 µPC324C TRACKING CONTROL
Q35 2SA1175 THERMAL COMP
Q36 2SA1175 8FG SW
Q5 2SA1175 βII/βIII SW
IC3 µPC324C BRAKE POSITION
TP-9
FG BIAS
TP-2
TP-1
TRACON CENTER
TRACKING CENTER
IC6 TC4066BP FWD/RVS SW
Q3, Q4 2SC2785 GATE
POSITION SIGNAL
βII/βIII TRACKING
TP-3
Q12, Q13 2SC2785 βII/βIII SW
BRAKE POSITION
Q8 2SC2785 8FG SW
Q9 2SC2785 SW
Q10 2SA1175
Q14, Q15 2SA1175 NOISE POSITION
IC13 TC4011BP βII/βIII SW
Q16 2SC2785 RIPPLE FILTER
Q17 2SC2785 CTL AMP
IC6 TC4066BP FWD/RVS SW
IC1 µPC324C CTL WAVEFORM
Q18 2SC2021 CTL PULSE
IC13 TC4011BP GATE DRIVE
Q19, Q20 2SC2785 βII/βIII SW
EDIT
TP-4
TP-5
TP-6
IC7 TC4013BP D-FF
IC12 TC4081BP AND GATE
CAPSTAN MOTOR DRIVE
Q23 2SA1175 βII/βIII SW
Q24 2SC2785 SW
D3, D4, D5 1SS133T
Q25 2SC2785 SW
Q26, Q27 2SA1175 βII/βIII SW
D6 1SS133T
BRAKE WIDTH
BRAKE TIME βII/βIII
TP-8
TP-7
D7, D15 1SS133T
CN2 (BLK)
1 RF SW PULSE BRN
2 PB CTL
3 GND ORG
4 STEP FWD YEL
5 CAP RVS WHT
6 CAP CUT BLU
7 DRUM COMPS VIO
8 VDL S GRY
9 VDL T WHT
10 NOISE POSITION BLK
11 FG (A) BRN
12 FG (B) RED
IC14 TC4069BP INVERTER
Q33 2SA1175
Q29 2SA1175 T.C
Q28 2SA1175 T.C
IC14 TC4069UBP INVERTER
Q34 2SA1175
Q37 2SC2758
IC8 TC4081BP AND GATE
Q21 2SC2785 CAP RVS
IC9 MC14538BCP PWM
D9 1SS133T
IC10 TC4011BP PWM/FF
IC11 TC4011BP DRIVE & BRAKE
IC9 MC14538BCP BRAKE MM
IC12 TC4081BP CAPSTAN CONT
STILL fH
IC12 TC4081BP GATE
TV VERT LOCK
VD
RVS SLOW fH
FWD SLOW fH
Vcc
+3V
RF HS
MODE CONVERTER
STEP SIG PROCESS
SWITCH CONTROL
VD GENERATOR
DELAY LINE DRIVE PULSE
IC5 BX1Q41 JOG
Q30 2SC2785 βII/βIII SW
D13, D14 1SS133T
IC1 µPC324C DRUM COMP
Q31 2SA1175 GATE
Q6 2SC2785 T REEL CONT
Q22 2SA1175 S REEL CONT
nc mark : βIII PB mode
VL-3 BOARD

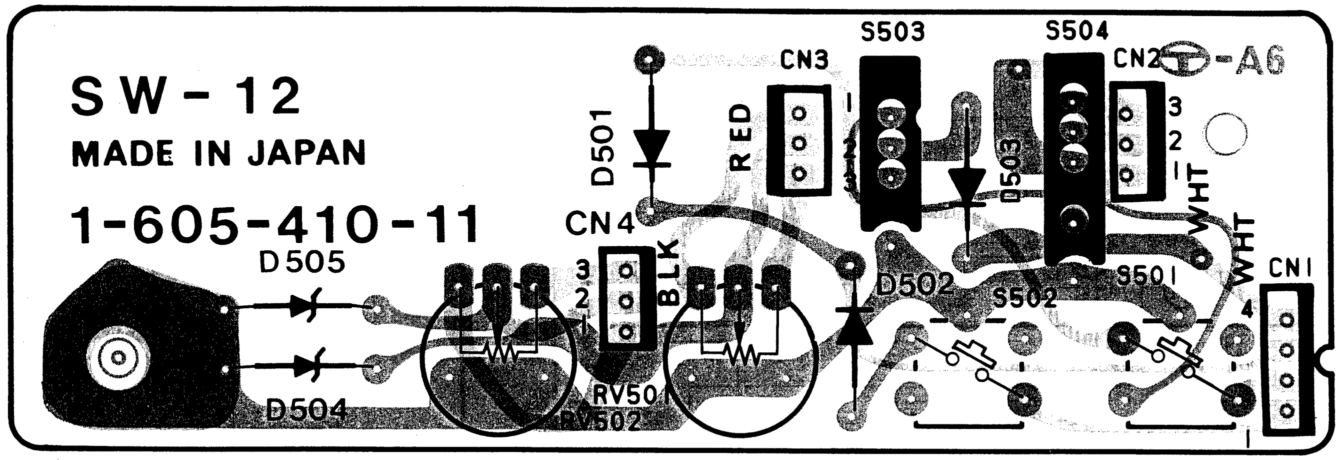
	35	36
	*	*
	*	0.4
	5	5.2

When indicating parts by reference number, please include the board name.

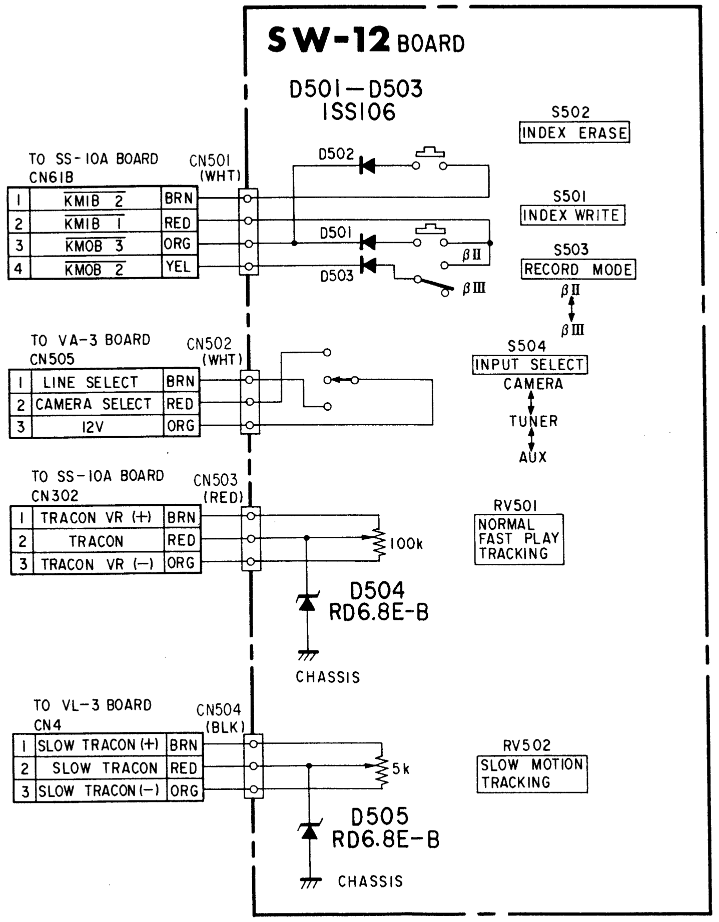
A B C D

SW-12 (SWITCH TRACKING CONTROL) PRINTED WIRING BOARD – *Ref. No.7500 series* –

SW-12 BOARD


SW-12
MADE IN JAPAN
1-605-410-11
D505
D504
D501
CN3
S503
S504
CN2
A6
RED
CN4
BLK
RV501
RV502
D502
D503
S502
S501
WHT
CN1
3
2
1
4

SCHEMATIC DIAGRAM

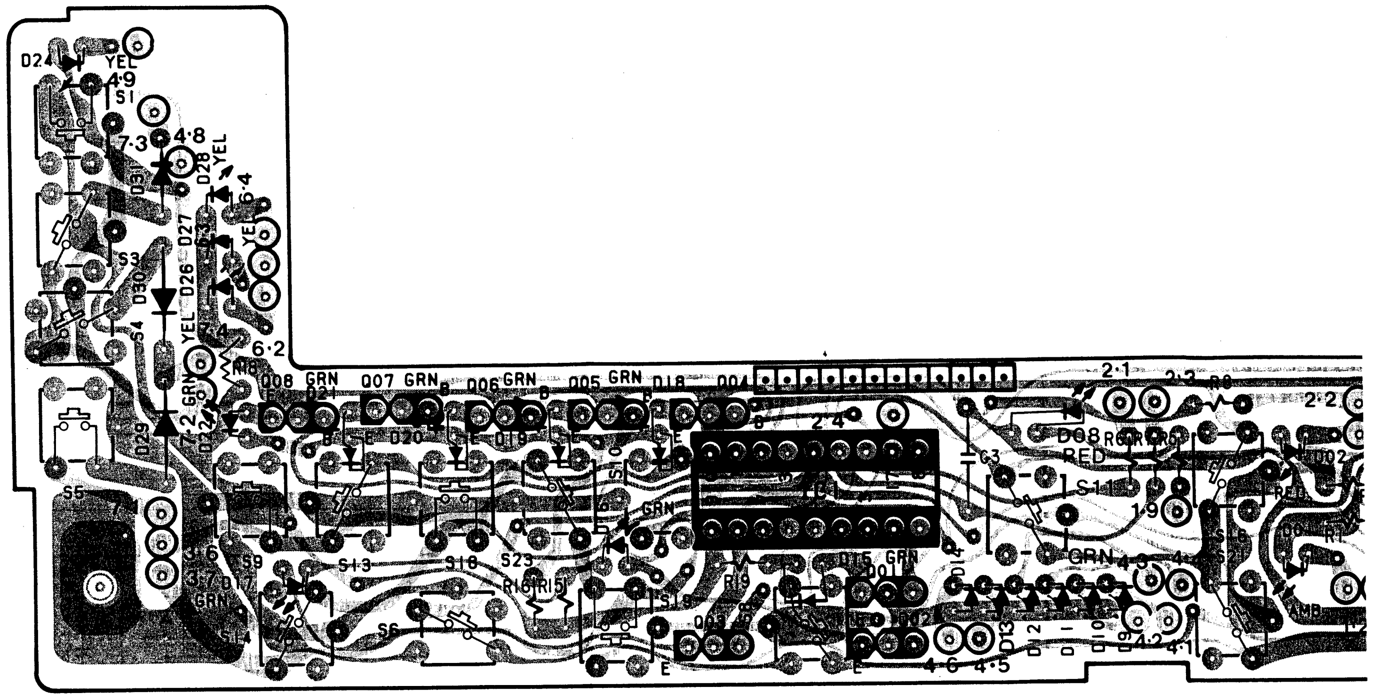

SW-12 BOARD
D501—D503
1SS106
TO SS-10A BOARD
CN61B
CN501
(WHT)
1 KMIB 2 BRN
2 KMIB 1 RED
3 KMOB 3 ORG
4 KMOB 2 YEL
D502
D501
D503
βII
βIII
S502
INDEX ERASE
S501
INDEX WRITE
S503
RECORD MODE
βII
βIII
TO VA-3 BOARD
CN505
CN502
(WHT)
1 LINE SELECT BRN
2 CAMERA SELECT RED
3 12V ORG
S504
INPUT SELECT
CAMERA
TUNER
AUX
TO SS-10A BOARD
CN302
CN503
(RED)
1 TRACON VR (+) BRN
2 TRACON RED
3 TRACON VR (–) ORG
100k
RV501
NORMAL
FAST PLAY
TRACKING
D504
RD6.8E-B
CHASSIS
TO VL-3 BOARD
CN4
CN504
(BLK)
1 SLOW TRACON (+) BRN
2 SLOW TRACON RED
3 SLOW TRACON (–) ORG
5k
RV502
SLOW MOTION
TRACKING
D505
RD6.8E-B
CHASSIS

When indicating parts by reference number, please include the board name.

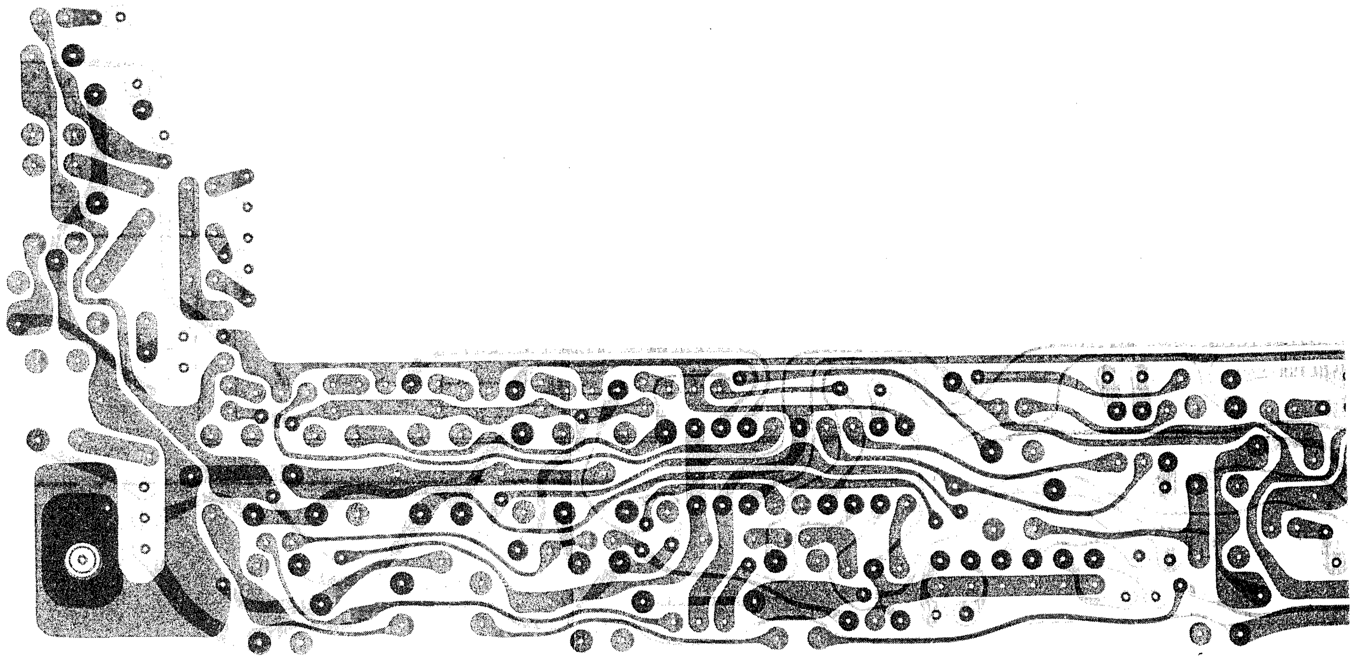
FU-3 (FUNCTION SWITCH INDICATOR) PRINTED WIRING BOARDS – *Ref. No.7100 series* –

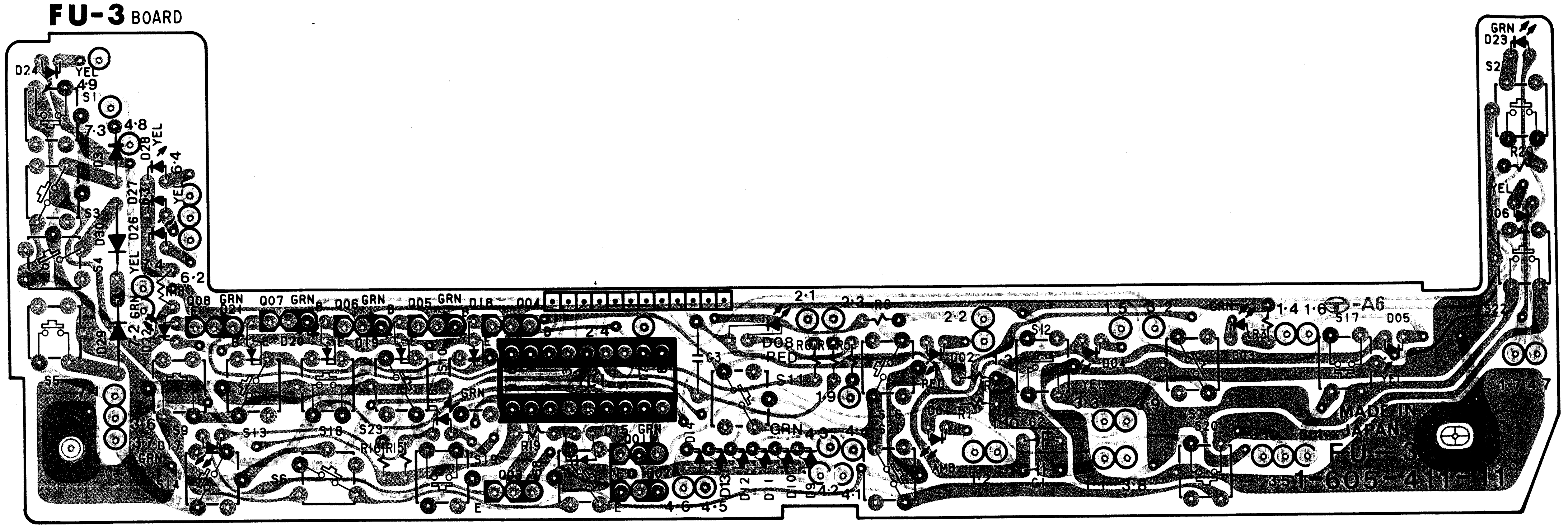
A B C D

FU-3 BOARD

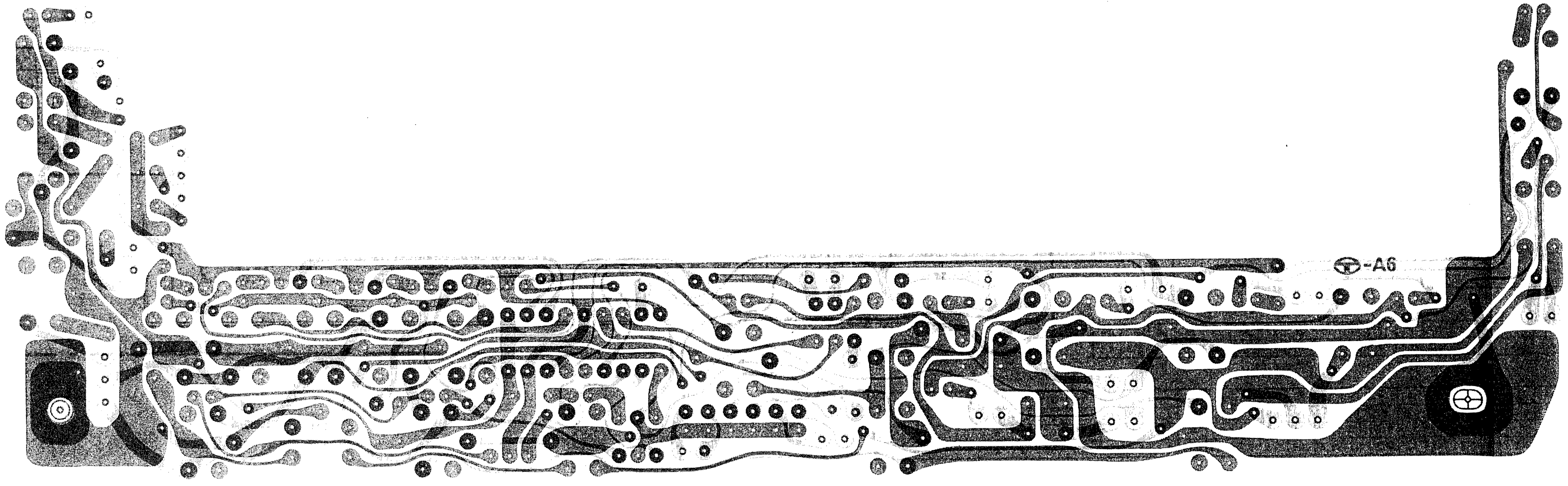

D24
YEL
4·9
S1
4·8
7·3
D31
D28
YEL
6·4
D27
S3
D30
D26
YEL
S4
6·2
D29
GRN
S5
Q08
GRN
D21
Q07
GRN
Q06
GRN
Q05
GRN
D18
Q04
D20
D19
S9
S13
S18
S23
R16
R15
IC1
D15
GRN
Q01
R19
Q03
Q02
D14
D13
D12
D11
D10
D9
D8
RED
S11
1·9
GRN
4·3
2·1
2·2
2·4
C3
4·6
4·5
4·2
4·1
AMB
E
S6
S14
D17
D16
D22

	A	B	C	D
Q·IC		08 07 06 05	04 03 IC1 01 02	
D	24 31 30 29 28 27 26 22	17 21 20 19 16	18 15 14	13 12 11 10 9 08 02 01

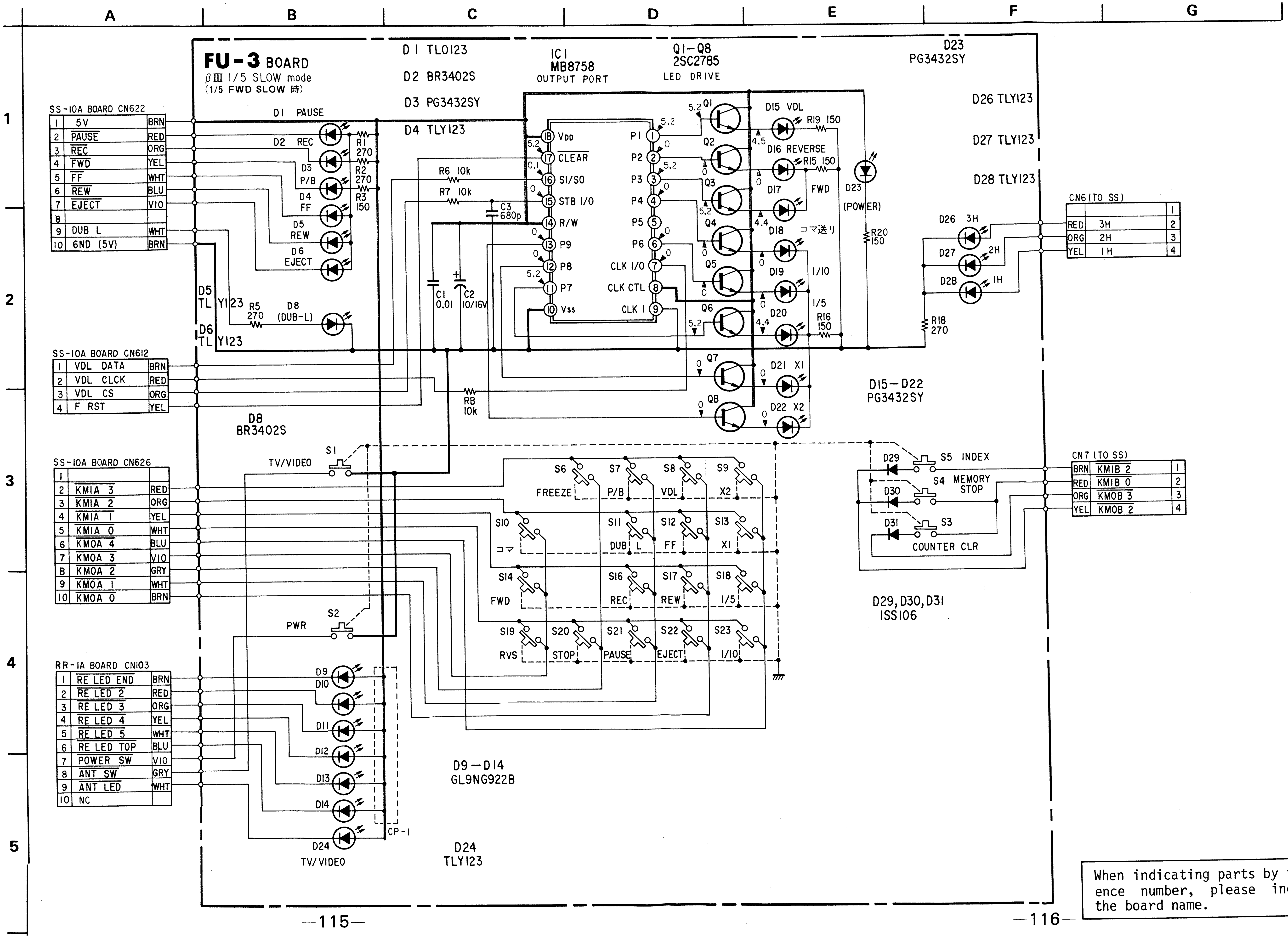



A
B
C
D
E
F
G
1
2
FU-3 BOARD
D24
YEL
S1
D31
D28
YEL
D27
D26
D30
S3
S4
YEL
GRN
D29
D32
S5
Q08
GRN
D21
Q07
GRN
Q06
GRN
Q05
GRN
D18
Q04
D20
D19
S13
S18
S23
S6
R19
Q03
D15
GRN
Q01
Q02
D08
RED
S11
D12
D11
D10
D9
D13
GRN
R8
S12
D02
D01
D04
YEL
D03
S17
D05
S20
GRN
D23
S2
R20
YEL
D06
S22
MADE IN JAPAN
FU-3
1-605-411-11
A6

	A	B	C	D	E	F	G
Q·IC		08 07 06 05	04 03 IC1 01 02				
D	24 31 30 29 28 27 26 22	17 21 20 19 16	18 15	14 13 12 11 10 9 08 02 01	04 03	05 23 06	



FU-3 (FUNCTION SWITCH INDICATOR) BOARD SCHEMATIC DIAGRAM – *Ref. No.7100 series* –

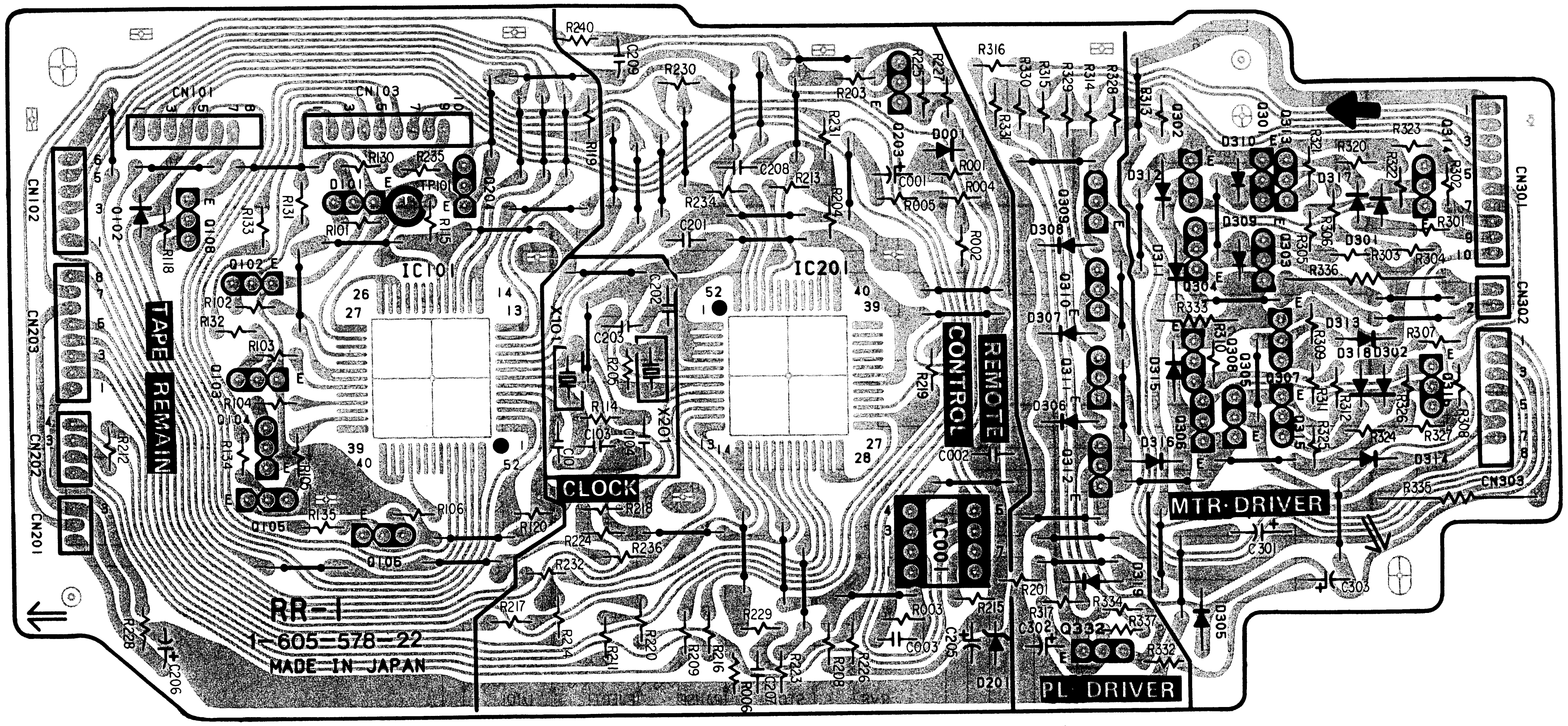

A
B
C
D
E
F
G
1
2
3
4
5
FU-3 BOARD
βIII 1/5 SLOW mode
(1/5 FWD SLOW 時)
D1 TL0123
D2 BR3402S
D3 PG3432SY
D4 TLY123
IC1
MB8758
OUTPUT PORT
Q1–Q8
2SC2785
LED DRIVE
D23
PG3432SY
D26 TLY123
D27 TLY123
D28 TLY123
SS-10A BOARD CN622
1 5V BRN
2 PAUSE RED
3 REC ORG
4 FWD YEL
5 FF WHT
6 REW BLU
7 EJECT VIO
8
9 DUB L WHT
10 GND (5V) BRN
D1 PAUSE
D2 REC
D3 P/B
D4 FF
D5 REW
D6 EJECT
R1 270
R2 270
R3 150
D5 TLY123
D6 TLY123
R5 270
D8 (DUB-L)
R6 10k
R7 10k
C3 680p
C1 0.01
C2 10/16V
18 VDD
17 CLEAR
16 SI/SO
15 STB I/O
14 R/W
13 P9
12 P8
11 P7
10 Vss
P1 1
P2 2
P3 3
P4 4
P5 5
P6 6
CLK I/O 7
CLK CTL 8
CLK I 9
Q1
Q2
Q3
Q4
Q5
Q6
Q7
Q8
D15 VDL
R19 150
D16 REVERSE
R15 150
D17 FWD
D18 コマ送り
D19 1/10
D20 1/5
R16 150
D21 X1
D22 X2
D23 (POWER)
R20 150
D26 3H
D27 2H
D28 1H
R18 270
CN6 (TO SS)
RED 3H 2
ORG 2H 3
YEL 1H 4
1
SS-10A BOARD CN612
1 VDL DATA BRN
2 VDL CLCK RED
3 VDL CS ORG
4 F RST YEL
R8 10k
D15–D22
PG3432SY
D8
BR3402S
SS-10A BOARD CN626
1
2 KMIA 3 RED
3 KMIA 2 ORG
4 KMIA 1 YEL
5 KMIA 0 WHT
6 KMOA 4 BLU
7 KMOA 3 VIO
8 KMOA 2 GRY
9 KMOA 1 WHT
10 KMOA 0 BRN
S1 TV/VIDEO
S2 PWR
S6 FREEZE
S7 P/B
S8 VDL
S9 X2
S10 コマ
S11 DUB L
S12 FF
S13 X1
S14 FWD
S16 REC
S17 REW
S18 1/5
S19 RVS
S20 STOP
S21 PAUSE
S22 EJECT
S23 1/10
D29 S5 INDEX
D30 S4 MEMORY STOP
D31 S3 COUNTER CLR
CN7 (TO SS)
BRN KMIB 2 1
RED KMIB 0 2
ORG KMOB 3 3
YEL KMOB 2 4
D29, D30, D31
1SS106
RR-1A BOARD CN103
1 RE LED END BRN
2 RE LED 2 RED
3 RE LED 3 ORG
4 RE LED 4 YEL
5 RE LED 5 WHT
6 RE LED TOP BLU
7 POWER SW VIO
8 ANT SW GRY
9 ANT LED WHT
10 NC
D9
D10
D11
D12
D13
D14
D24 TV/VIDEO
CP-1
D9–D14
GL9NG922B
D24
TLY123
5.2
0.1
0
4.5
4.4

When indicating parts by reference number, please include the board name.

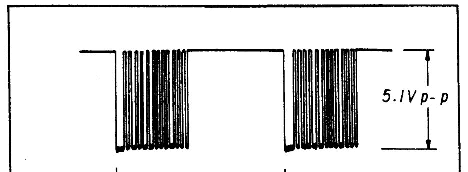
RR-1A (REMOTE CONTROL (RECEIVER) TAPE SOLENOID & MOTOR DRIVE REMAINING INDICATOR) PRINTED WIRING BOARD – *Ref. No.8000 series* –

RR-1A BOARD

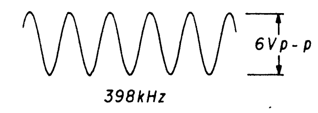
	A	B	C	D	E	F	G	
Q, IC			108 102 103 104 105 101 106	204 IC101	203 IC201 IC001	309 310 311 312 332 302 304 308 306 301,313 303 307 305	315 314 316	Q, IC
D			102		001	201 308 307 306 319 312 311 315 316 305 310 309	317,301 313 318,302 314	D


RR-1
1-605-578-22
MADE IN JAPAN
TAPE REMAIN
CLOCK
REMOTE CONTROL
MTR·DRIVER
PL DRIVER
IC101
IC201
IC001
CN101
CN103
CN102
CN203
CN202
CN201
CN301
CN302
CN303
X101
X201
Q101
Q102
Q103
Q104
Q105
Q106
Q108
Q332
R240
R230
R203
R316
R320
R323
R336
R335
C301
C303
C206
D201

RR-1A BOARD

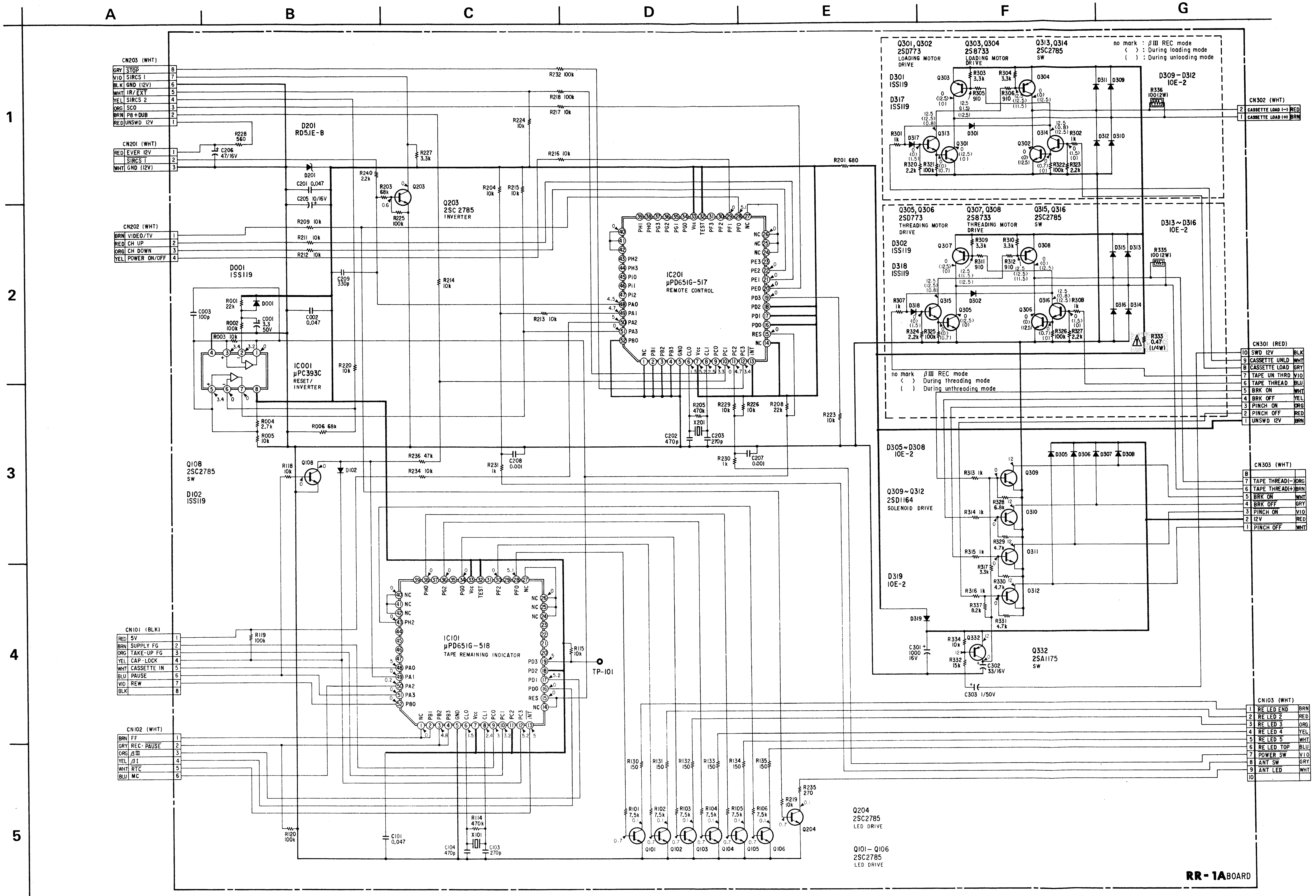


IC201 (48) Press the PLAY(▷) button (VIDEO ACTION CONTROL)

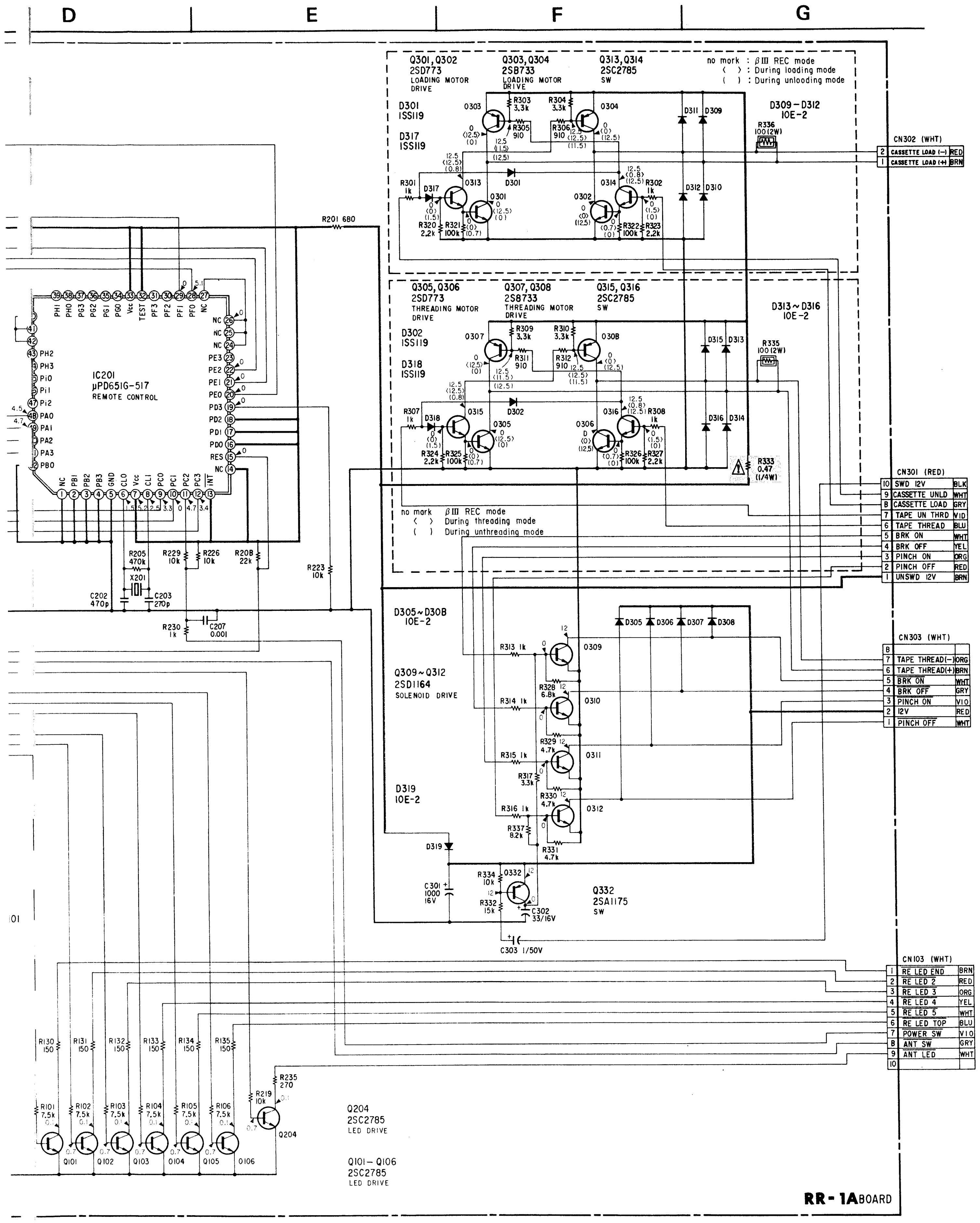


IC101 ⑧ / IC201 ⑧

RR-1A (REMOTE CONTROL (RECEIVER) TAPE SOLENOID & MOTOR DRIVE REMAINING INDICATOR) BOARD SCHEMATIC DIAGRAM — *Ref. No.8000 series* —



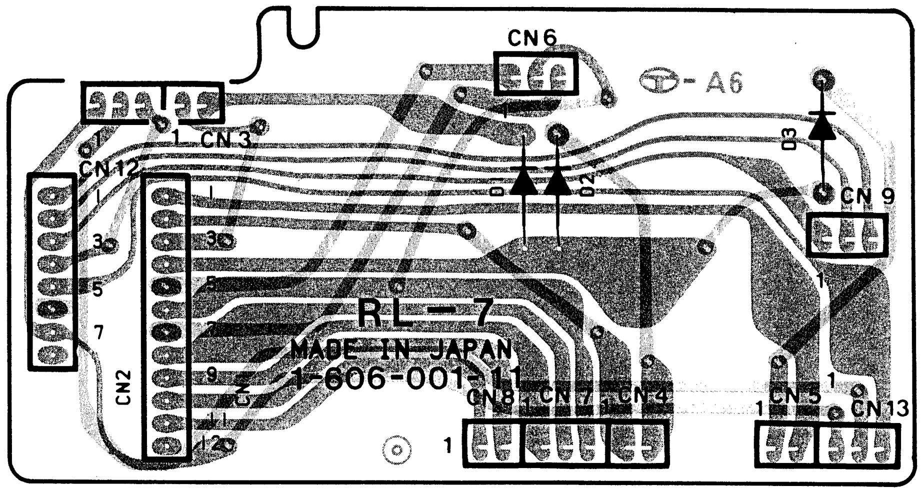
A
B
C
D
E
F
G
1
2
3
4
5
CN203 (WHT)
GRY STOP 8
VIO SIRCS I 7
BLK GND (12V) 6
WHT IR/EXT 5
YEL SIRCS 2 4
ORG SCO 3
BRN PB+DUB 2
RED UNSWD 12V 1
CN201 (WHT)
RED EVER 12V 1
SIRCS I 2
WHT GND (12V) 3
CN202 (WHT)
BRN VIDEO/TV 1
RED CH UP 2
ORG CH DOWN 3
YEL POWER ON/OFF 4
D201
RD5.1E-B
Q203
2SC2785
INVERTER
D001
1SS119
IC001
μPC393C
RESET/INVERTER
Q108
2SC2785
SW
D102
1SS119
IC201
μPD651G-517
REMOTE CONTROL
IC101
μPD651G-518
TAPE REMAINING INDICATOR
TP-101
X201
X101
CN101 (BLK)
RED 5V 1
BRN SUPPLY FG 2
ORG TAKE-UP FG 3
YEL CAP·LOCK 4
WHT CASSETTE IN 5
BLU PAUSE 6
VIO REW 7
BLK 8
CN102 (WHT)
BRN FF 1
GRY REC·PAUSE 2
ORG βIII 3
YEL βI 4
WHT RTC 5
BLU MC 6
Q301, Q302
2SD773
LOADING MOTOR DRIVE
Q303, Q304
2SB733
LOADING MOTOR DRIVE
Q313, Q314
2SC2785
SW
no mark : βIII REC mode
( ) : During loading mode
( ) : During unloading mode
D301
1SS119
D317
1SS119
D309-D312
10E-2
R336
100(2W)
CN302 (WHT)
2 CASSETTE LOAD (-) RED
1 CASSETTE LOAD (+) BRN
Q305, Q306
2SD773
THREADING MOTOR DRIVE
Q307, Q308
2SB733
THREADING MOTOR DRIVE
Q315, Q316
2SC2785
SW
D302
1SS119
D318
1SS119
D313~D316
10E-2
R335
100(2W)
R333
0.47
(1/4W)
no mark βIII REC mode
( ) During threading mode
( ) During unthreading mode
CN301 (RED)
10 SWD 12V BLK
9 CASSETTE UNLD WHT
8 CASSETTE LOAD GRY
7 TAPE UN THRD VIO
6 TAPE THREAD BLU
5 BRK ON WHT
4 BRK OFF YEL
3 PINCH ON ORG
2 PINCH OFF RED
1 UNSWD 12V BRN
D305~D308
10E-2
Q309~Q312
2SD1164
SOLENOID DRIVE
D319
10E-2
CN303 (WHT)
8
7 TAPE THREAD(-) ORG
6 TAPE THREAD(+) BRN
5 BRK ON WHT
4 BRK OFF GRY
3 PINCH ON VIO
2 12V RED
1 PINCH OFF WHT
Q332
2SA1175
SW
C303 1/50V
CN103 (WHT)
1 RE LED END BRN
2 RE LED 2 RED
3 RE LED 3 ORG
4 RE LED 4 YEL
5 RE LED 5 WHT
6 RE LED TOP BLU
7 POWER SW VIO
8 ANT SW GRY
9 ANT LED WHT
10
Q204
2SC2785
LED DRIVE
Q101-Q106
2SC2785
LED DRIVE
RR-1A BOARD


D
E
F
G
Q301, Q302 2SD773 LOADING MOTOR DRIVE
Q303, Q304 2SB733 LOADING MOTOR DRIVE
Q313, Q314 2SC2785 SW
no mark : βIII REC mode
( ) : During loading mode
( ) : During unlooding mode
D301 ISS119
D317 ISS119
D309–D312 10E-2
R336 100 (2W)
CN302 (WHT)
2 CASSETTE LOAD (−) RED
1 CASSETTE LOAD (+) BRN
Q305, Q306 2SD773 THREADING MOTOR DRIVE
Q307, Q308 2SB733 THREADING MOTOR DRIVE
Q315, Q316 2SC2785 SW
D302 ISS119
D318 ISS119
D313~D316 10E-2
R335 100 (2W)
R333 0.47 (1/4W)
no mark βIII REC mode
( ) During threading mode
( ) During unthreading mode
CN301 (RED)
10 SWD 12V BLK
9 CASSETTE UNLD WHT
8 CASSETTE LOAD GRY
7 TAPE UN THRD VIO
6 TAPE THREAD BLU
5 BRK ON WHT
4 BRK OFF YEL
3 PINCH ON ORG
2 PINCH OFF RED
1 UNSWD 12V BRN
IC201 μPD651G-517 REMOTE CONTROL
R201 680
R205 470k
R229 10k
R226 10k
R208 22k
R223 10k
X201
C202 470p
C203 270p
R230 1k
C207 0.001
D305~D308 10E-2
Q309~Q312 2SD1164 SOLENOID DRIVE
D319 10E-2
CN303 (WHT)
8
7 TAPE THREAD(−) ORG
6 TAPE THREAD(+) BRN
5 BRK ON WHT
4 BRK OFF GRY
3 PINCH ON VIO
2 12V RED
1 PINCH OFF WHT
C301 1000 16V
R334 10k
R332 15k
C302 33/16V
C303 1/50V
Q332 2SA1175 SW
CN103 (WHT)
1 RE LED END BRN
2 RE LED 2 RED
3 RE LED 3 ORG
4 RE LED 4 YEL
5 RE LED 5 WHT
6 RE LED TOP BLU
7 POWER SW VIO
8 ANT SW GRY
9 ANT LED WHT
10
R130 150
R131 150
R132 150
R133 150
R134 150
R135 150
R101 7.5k
R102 7.5k
R103 7.5k
R104 7.5k
R105 7.5k
R106 7.5k
R219 10k
R235 270
Q204 2SC2785 LED DRIVE
Q101–Q106 2SC2785 LED DRIVE
RR-1A BOARD

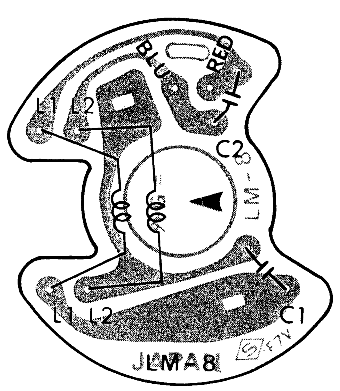
When indicating parts by reference number, please include the board name.

RL-7 (RELAY) AND LM-S (NOISE FILTER) PRINTED WIRING BOARD – *Ref. No.LM-8 BOARD: 9000 series RL-7 BOARD: 9100 series* –

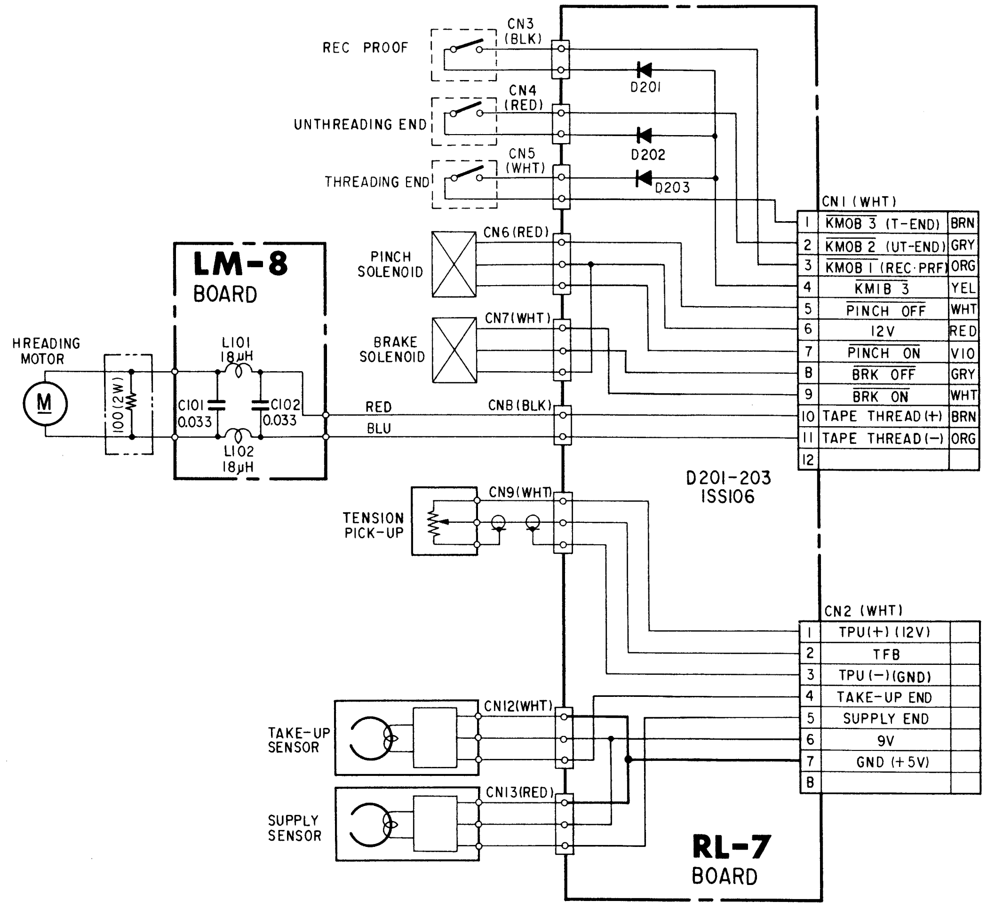
RL-7 BOARD


CN6
A6
CN12
CN3
CN9
CN2
D1
D2
D3
RL-7
MADE IN JAPAN
1-606-001-11
CN8
CN7
CN4
CN5
CN13
1
3
5
7
9
12

LM-8 BOARD


L1
L2
BLU
RED
C2
LM-8
C1
JLM-8
F7V

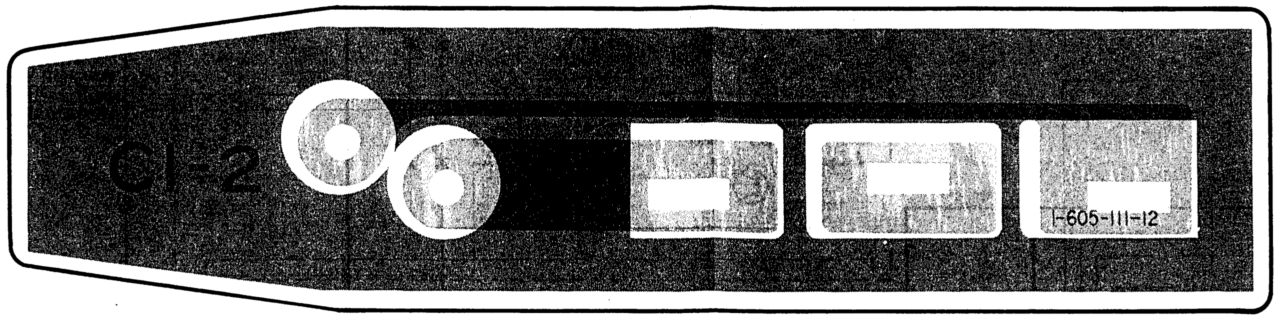
SCHEMATIC DIAGRAM


REC PROOF
CN3 (BLK)
UNTHREADING END
CN4 (RED)
THREADING END
CN5 (WHT)
D201
D202
D203
PINCH SOLENOID
CN6 (RED)
BRAKE SOLENOID
CN7 (WHT)
LM-8 BOARD
HREADING MOTOR
M
100 (2W)
L101 18μH
C101 0.033
C102 0.033
L102 18μH
RED
BLU
CN8 (BLK)
CN1 (WHT)
1 KMOB 3 (T-END) BRN
2 KMOB 2 (UT-END) GRY
3 KMOB 1 (REC·PRF) ORG
4 KMIB 3 YEL
5 PINCH OFF WHT
6 12V RED
7 PINCH ON VIO
8 BRK OFF GRY
9 BRK ON WHT
10 TAPE THREAD (+) BRN
11 TAPE THREAD (−) ORG
12
D201-203 ISS106
TENSION PICK-UP
CN9 (WHT)
CN2 (WHT)
1 TPU (+) (12V)
2 TFB
3 TPU (−) (GND)
4 TAKE-UP END
5 SUPPLY END
6 9V
7 GND (+5V)
8
TAKE-UP SENSOR
CN12 (WHT)
SUPPLY SENSOR
CN13 (RED)
RL-7 BOARD

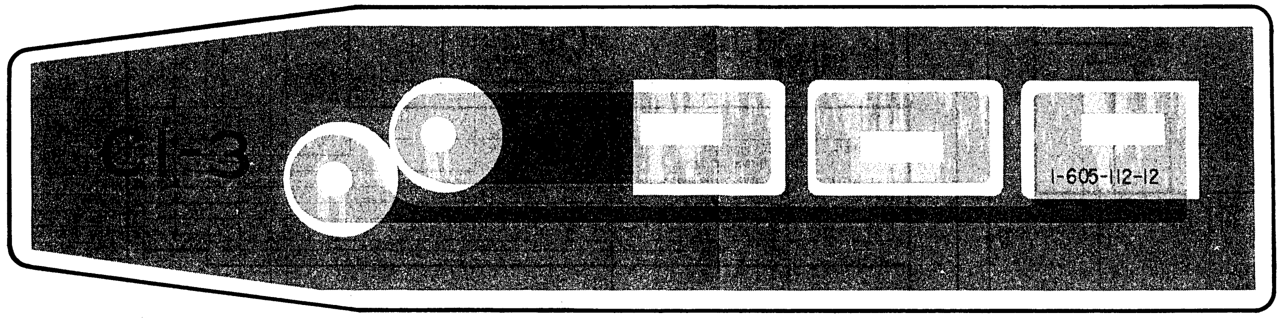
When indicating parts by reference number, please include the board name.

LM-9 (NOISE FILTER RELAY), RL-4 (RELAY), CI-2, CI-3 (SWITCH) PRINTED WIRING BOARD – *Ref. No.LM-9 BOARD: 9500 series* –

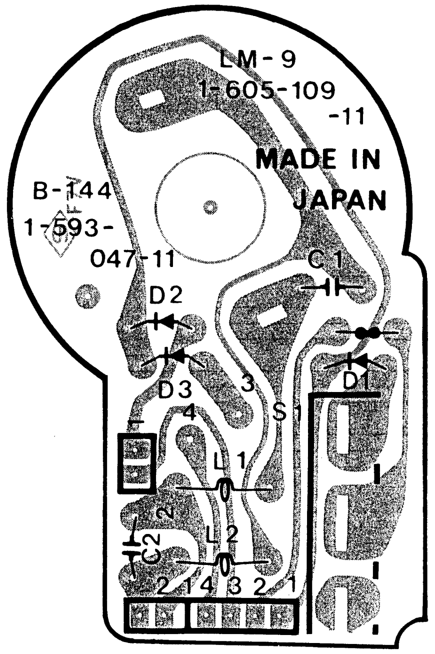
CI-2 BOARD


CI-2
1-605-111-12

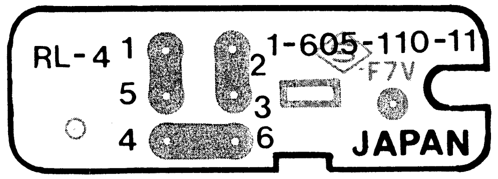
CI-3 BOARD


CI-3
1-605-112-12

LM-9BOARD

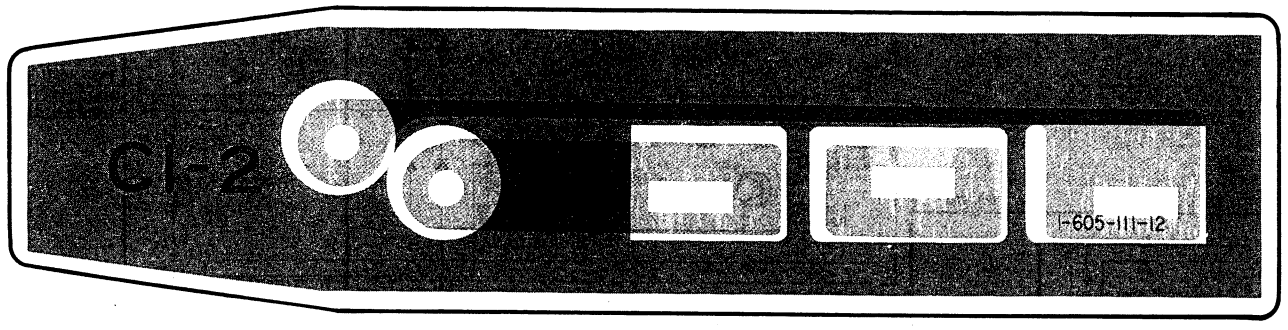

LM-9
1-605-109
-11
MADE IN JAPAN
B-144
1-593-
047-11
C1
D2
D3
D1
S1
L1
L2
C2
3
4
2 1 4 3 2 1

RL-4 BOARD

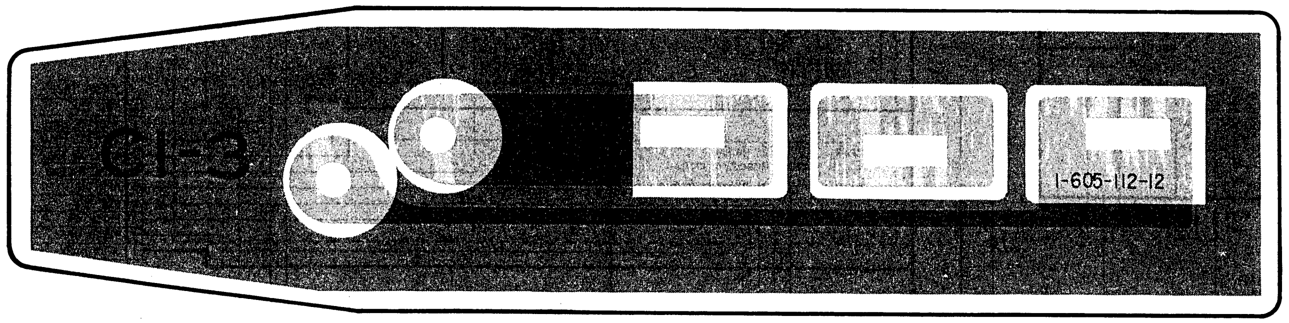

RL-4
1
2
3
4
5
6
1-605-110-11
F7V
JAPAN

LM-9 (NOISE FILTER RELAY), RL-4 (RELAY), CI-2, CI-3 (SWITCH) PRINTED WIRING BOARD – *Ref. No.LM-9 BOARD: 9500 series* –

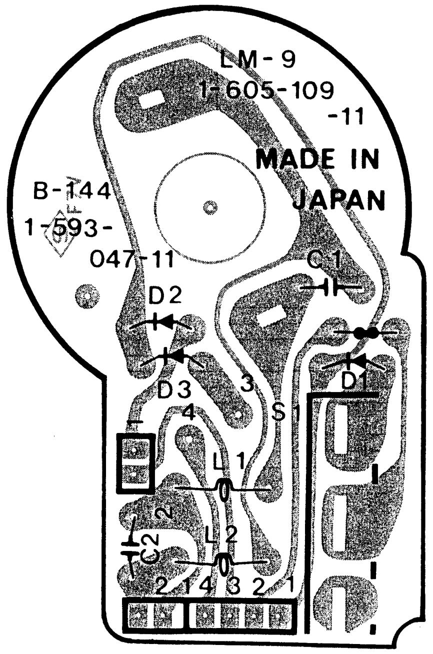
CI-2 BOARD


CI-2
1-605-111-12

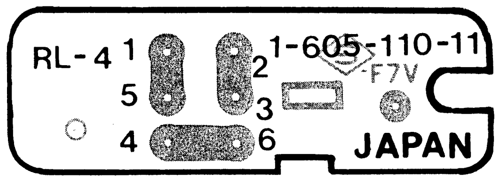
CI-3 BOARD


CI-3
1-605-112-12

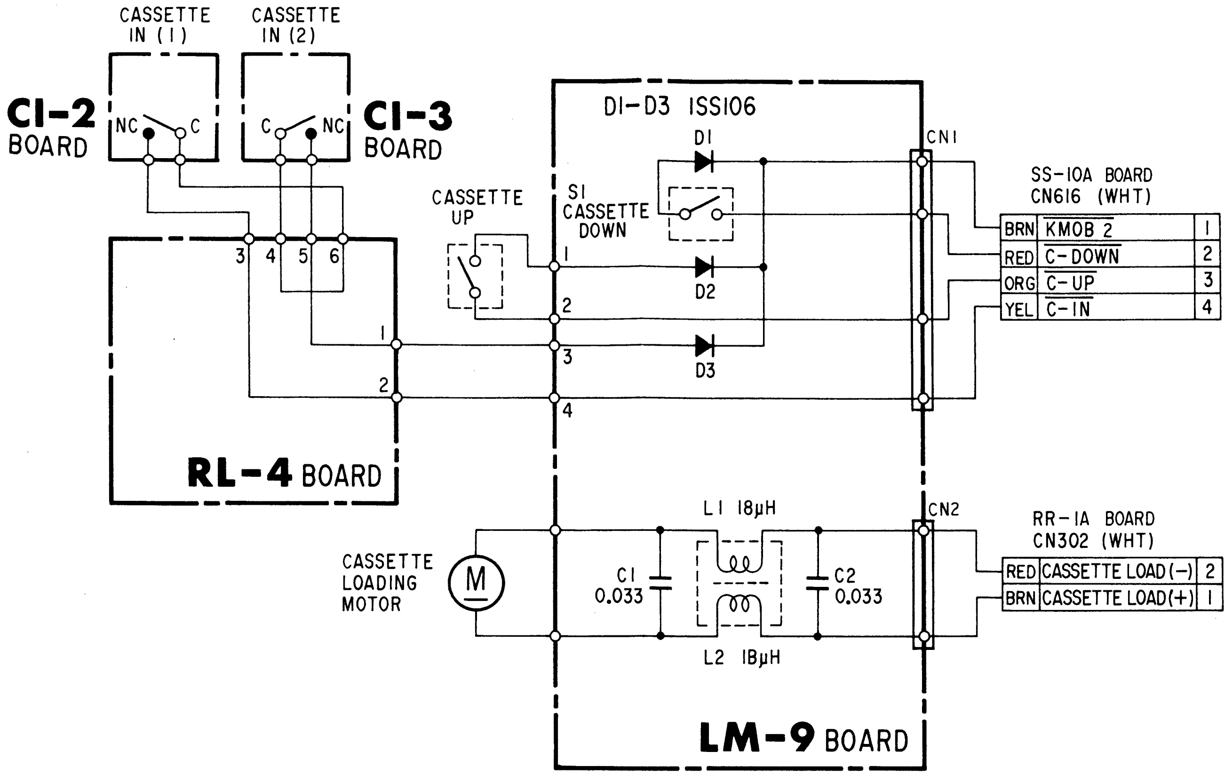
LM-9 BOARD


LM-9
1-605-109
-11
MADE IN
JAPAN
B-144
1-593-
047-11
C1
D2
D3
D1
3
4
S1
L1
L2
C2
2 1 4 3 2 1

RL-4 BOARD


RL-4
1
5
4
2
3
6
1-605-110-11
F7V
JAPAN

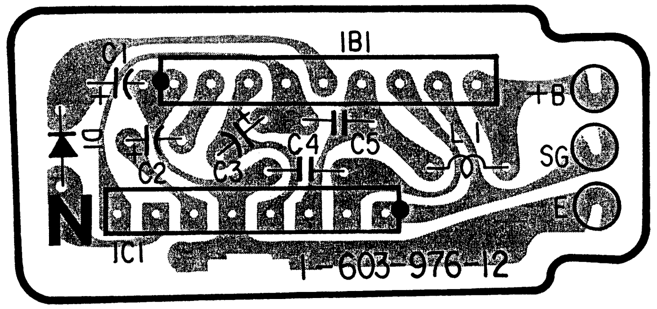
LM-9 (NOISE FILTER RELAY), RL-4 (RELAY), CI-2, CI-3, (SWITCH) BOARD SCHEMATIC DIAGRAM – *Ref. No.LM-9 BOARD: 9500 series* –


CASSETTE IN (1)
CASSETTE IN (2)
CI-2 BOARD
NC
C
C
NC
CI-3 BOARD
3 4 5 6
1
2
RL-4 BOARD
CASSETTE UP
S1 CASSETTE DOWN
D1-D3 1SS106
D1
D2
D3
1
2
3
4
CN1
SS-10A BOARD CN616 (WHT)
BRN KMOB 2 1
RED C-DOWN 2
ORG C-UP 3
YEL C-IN 4
CASSETTE LOADING MOTOR
M
C1 0.033
L1 18μH
L2 18μH
C2 0.033
CN2
RR-1A BOARD CN302 (WHT)
RED CASSETTE LOAD(−) 2
BRN CASSETTE LOAD(+) 1
LM-9 BOARD

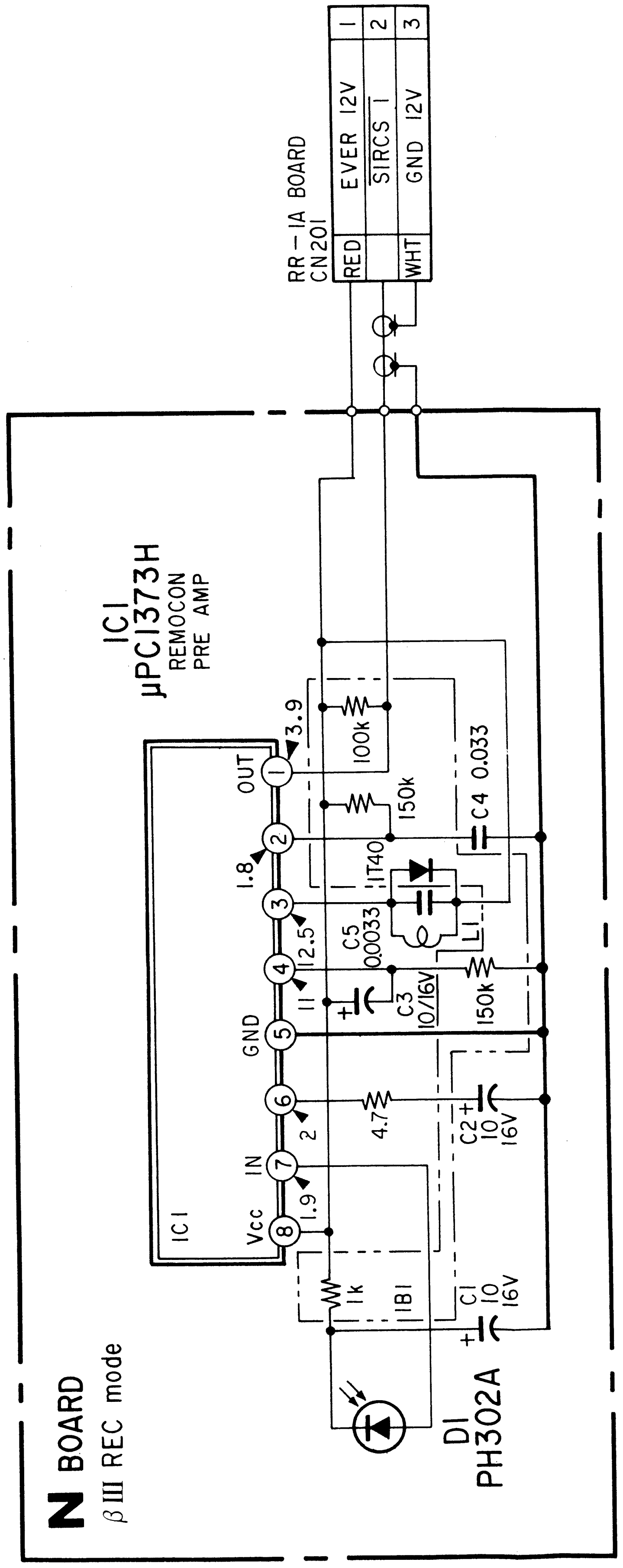
When indicating parts by reference number, please include the board name.

N (INFRARED RECEIVER) PRINTED WIRING BOARD *– Ref. No.9600 series –*

N BOARD


A
B
C
D
1
2
3
4
5
C1
IB1
D1
C2
C3
C4
C5
L1
+B
SG
E
N
IC1
1-603-976-12

N (INFRARED RECEIVER) BOARD SCHEMATIC DIAGRAM *– Ref. No.9600 series –*

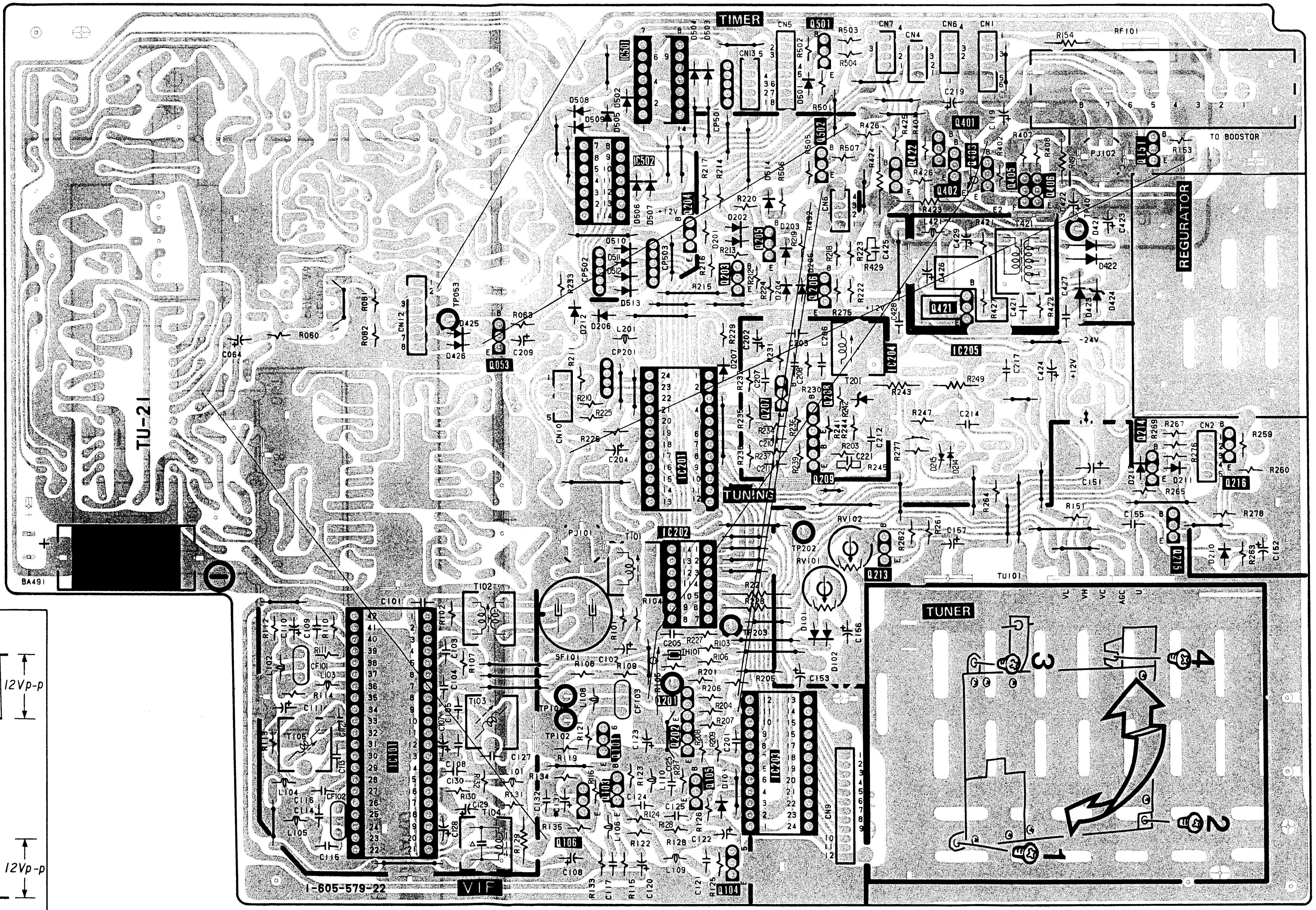

A
B
C
D
1
2
3
4
5
RR – 1A BOARD
CN201
RED
WHT
1
2
3
EVER 12V
SIRCS 1
GND 12V
IC1
μPC1373H
REMOCON
PRE AMP
OUT
GND
IN
Vcc
IC1
3.9
1.8
12.5
11
2
1.9
100k
150k
C4 0.033
1T40
C5
0.0033
L1
C3
10/16V
150k
4.7
C2
10
16V
1k
IB1
C1
10
16V
D1
PH302A
N BOARD
βIII REC mode

When indicating parts by reference number, please include the board name.

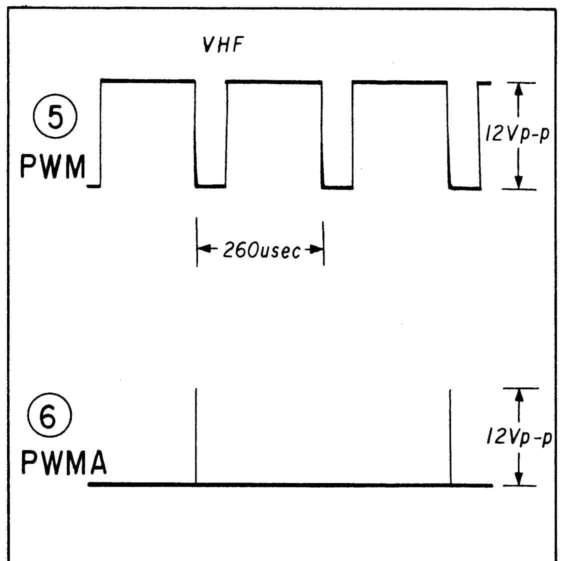
TU-21 (TUNER), TU-22 (RELAY) PRINTED WIRING BOARD – *Ref. No.10000 series* –

TU-21 BOARD

	A	B	C	D	E	F	G
Q, IC			IC101	053 IC502 106 101 103	IC501 204 IC201 201,202 IC202 105 104 203 205 207,208 502 501 206 209 IC203	IC204 213 422 401,402 403 421 405,406	151 214 215 216
D				425 426 212 508 509 505,502 510 512 206	511 513 506,507 504,503 202 201 207 103 514 203 204,205 501 101,102	215,214	421 422 423,424 213 211 210
ADJ					RV101 RV102		

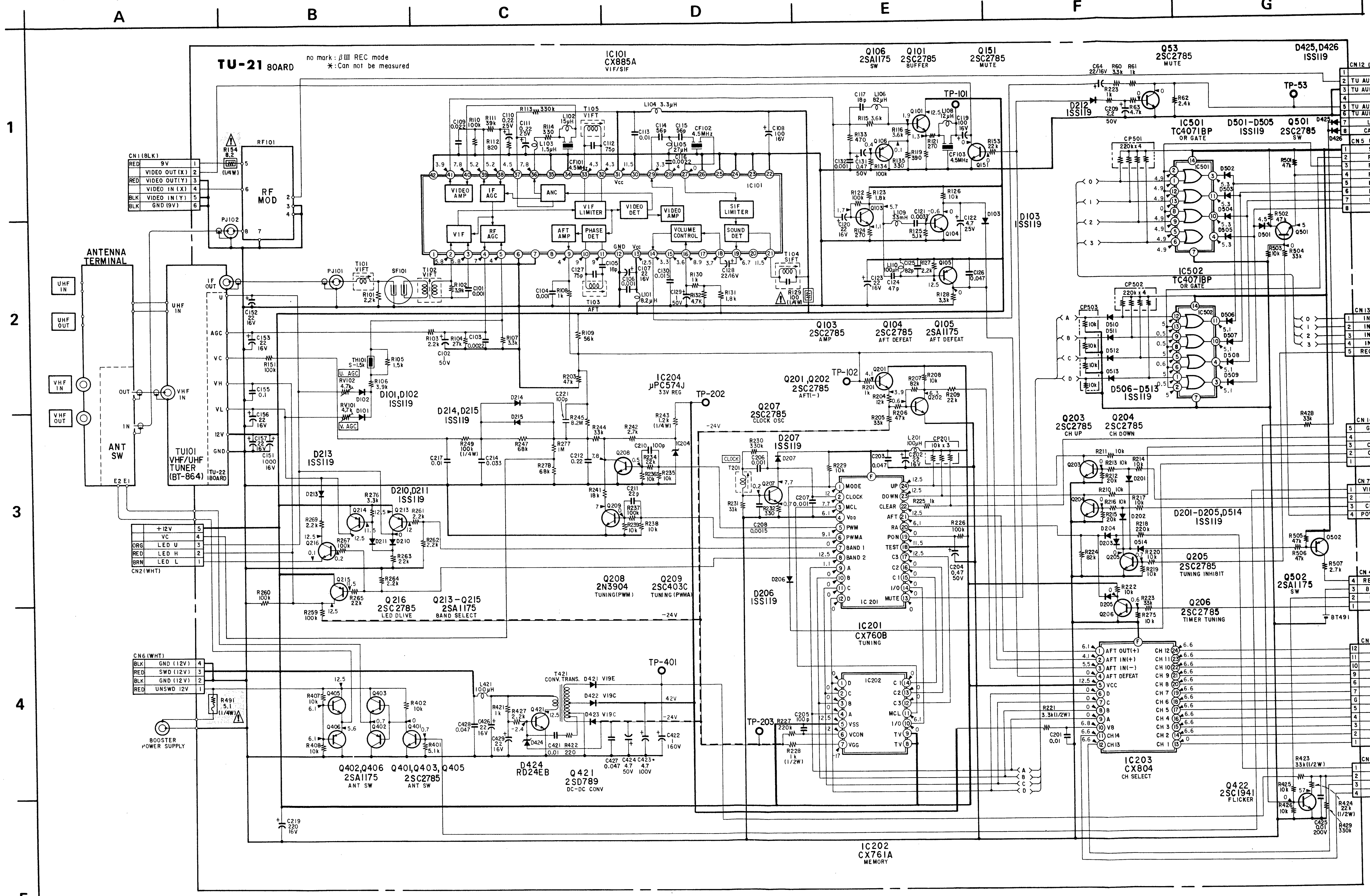

TIMER
TUNING
TUNER
REGURATOR
VIF
TU-21
TO BOOSTOR
BA491
1-605-579-22
IC101
IC201
IC202
IC203
IC204
IC205
IC502
IC501
Q501
Q401
Q402
Q053
Q201
Q104
Q106
Q213
Q214
Q215
Q216
Q421
CN1
CN2
CN4
CN5
CN6
CN7
CN9
CN10
CN12
CN13
RF101
TU101
T101
T102
T103
T105
T201
T421
SF101
CF101
CF102
CF103
RV101
RV102
TP053
TP101
TP102
TP202
PJ101
PJ102
R154
R153
R060
R061
R062
R063
D425
D426
C064
C209
+12V
-24V
VL
VH
VC
AGC
U
1
2
3
4

TU-21 BOARD



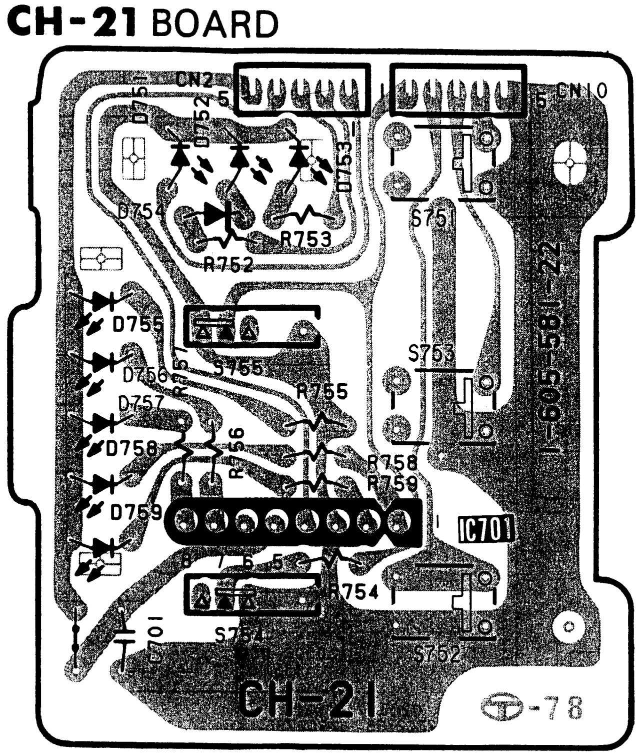
IC201 ⑤ ⑥

TU-21 (TUNER), TU-22 (RELAY) BOARD SCHEMATIC DIAGRAM — *Ref. No.10000 series* —

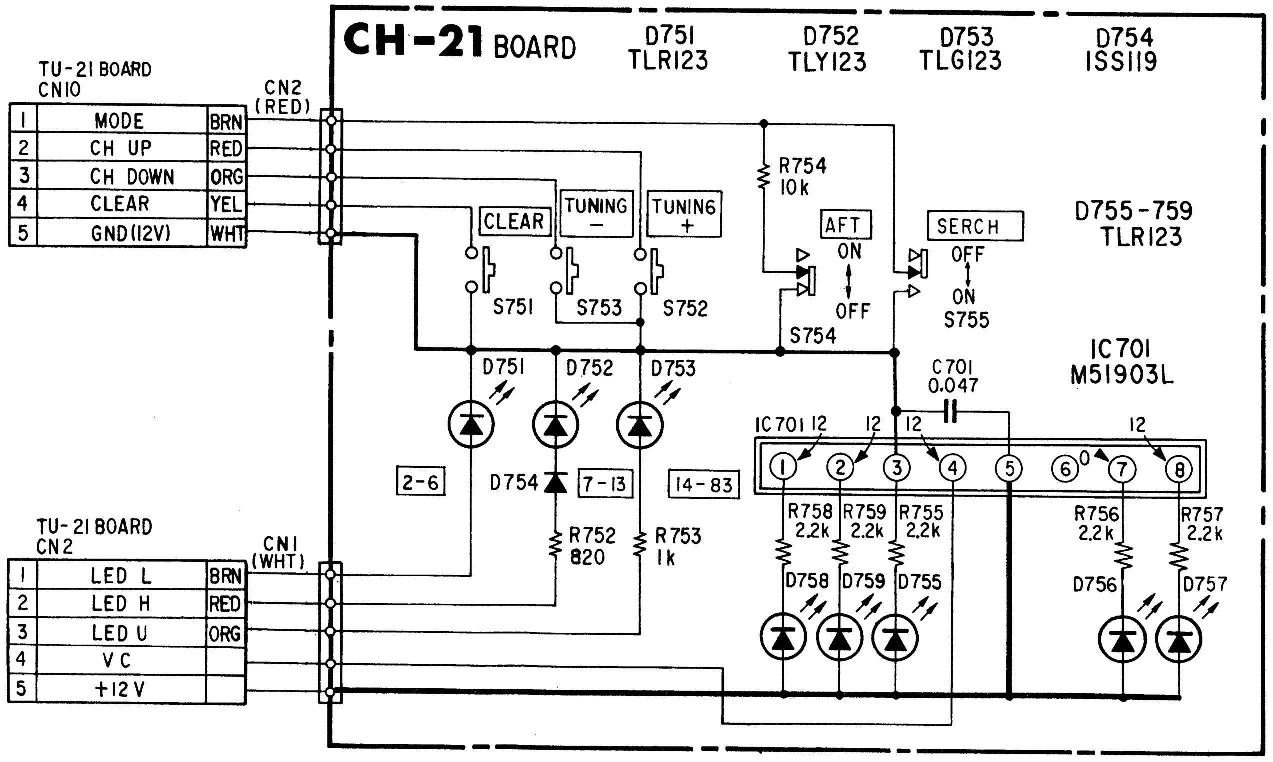

A
B
C
D
E
F
G
1
2
3
4
5
TU-21 BOARD
no mark : βIII REC mode
*: Can not be measured
IC101 CX885A VIF/SIF
Q106 2SA1175 SW
Q101 2SC2785 BUFFER
Q151 2SC2785 MUTE
Q53 2SC2785 MUTE
D425,D426 ISS119
RF101 RF MOD
ANTENNA TERMINAL
UHF IN
UHF OUT
VHF IN
VHF OUT
ANT SW
TU101 VHF/UHF TUNER (BT-864)
TU-22 BOARD
CN1 (BLK)
9V
VIDEO OUT (X)
VIDEO OUT (Y)
VIDEO IN (X)
VIDEO IN (Y)
GND (9V)
CN2 (WHT)
+12V
VC
LED U
LED H
LED L
CN6 (WHT)
GND (12V)
SWD (12V)
GND (12V)
UNSWD 12V
BOOSTER POWER SUPPLY
VIDEO AMP
IF AGC
ANC
VIF LIMITER
VIDEO DET
VIDEO AMP
SIF LIMITER
VIF
RF AGC
AFT AMP
PHASE DET
VOLUME CONTROL
SOUND DET
T101 VIFT
SF101
T102 VIFT
T103 AFT
T104 SIFT
T105 VIFT
TP-101
TP-102
TP-202
TP-203
TP-401
TP-53
D101,D102 ISS119
D214,D215 ISS119
D213 ISS119
D210,D211 ISS119
IC204 μPC574J 33V REG
Q201,Q202 2SC2785 AFT(−)
Q207 2SC2785 CLOCK OSC
D207 ISS119
D206 ISS119
Q103 2SC2785 AMP
Q104 2SC2785 AFT DEFEAT
Q105 2SA1175 AFT DEFEAT
D103 ISS119
D212 ISS119
IC501 TC4071BP OR GATE
D501–D505 ISS119
Q501 2SC2785 SW
IC502 TC4071BP OR GATE
D506–D513 ISS119
Q203 2SC2785 CH UP
Q204 2SC2785 CH DOWN
D201–D205,D514 ISS119
Q205 2SC2785 TUNING INHIBIT
Q206 2SC2785 TIMER TUNING
Q502 2SA1175 SW
Q208 2N3904 TUNING(PWM)
Q209 2SC403C TUNING (PWMA)
Q216 2SC2785 LED DLIVE
Q213–Q215 2SA1175 BAND SELECT
IC201 CX760B TUNING
IC202 CX761A MEMORY
IC203 CX804 CH SELECT
Q402,Q406 2SA1175 ANT SW
Q401,Q403,Q405 2SC2785 ANT SW
D424 RD24EB
Q421 2SD789 DC-DC CONV
T421 CONV. TRANS.
D421 V19E
D422 V19C
D423 V19C
Q422 2SC1941 FLICKER
CN12 (RED)
TU AUDIO IN (X) WHT
TU AUDIO IN (G) RED
TU AUDIO OUT (X)
TU AUDIO OUT (G) WHT
LINE
CAMERA
CN5 (WHT)
5V BRN
R5 RED
R4 ORG
R1 YEL
K0 GRN
K1 BLU
K2 VIO
K3 GRY
CN13 (BLK)
INDEX 0 BRN
INDEX 1 GRY
INDEX 2 ORG
INDEX 3 YEL
REC·PAUSE WHT
CN10 (RED)
GND (12V) WHT
CLEAR YEL
CH DOWN ORG
CH UP RED
MODE BRN
CN7 (RED)
VIDEO/TV BRN
CH UP RED
CH DOWN ORG
POWER ON/OFF YEL
CN4 (YEL)
REC·PAUSE YEL
BATTERY(+) ORG
FLICKER RED
CH UP BRN
CN9 (WHT)
CH12 RED
CH11 BRN
CH10 BLK
CH9 WHT
CH8 GRY
CH7 VIO
CH6 BLU
CH5 WHT
CH4 YEL
CH3 ORG
CH2 RED
CH1 BRN
CN8 (BLK)
COMMON BRN
NEON RED
CH13 ORG
CH14 YEL
CP501 220k×4
CP502 220k×4
CP503
BT491

When indicating parts by reference number, please include the board name.

CH-21 (TUNING SWITCH)
PRINTED WIRING BOARD – *Ref. No.11000 series* –

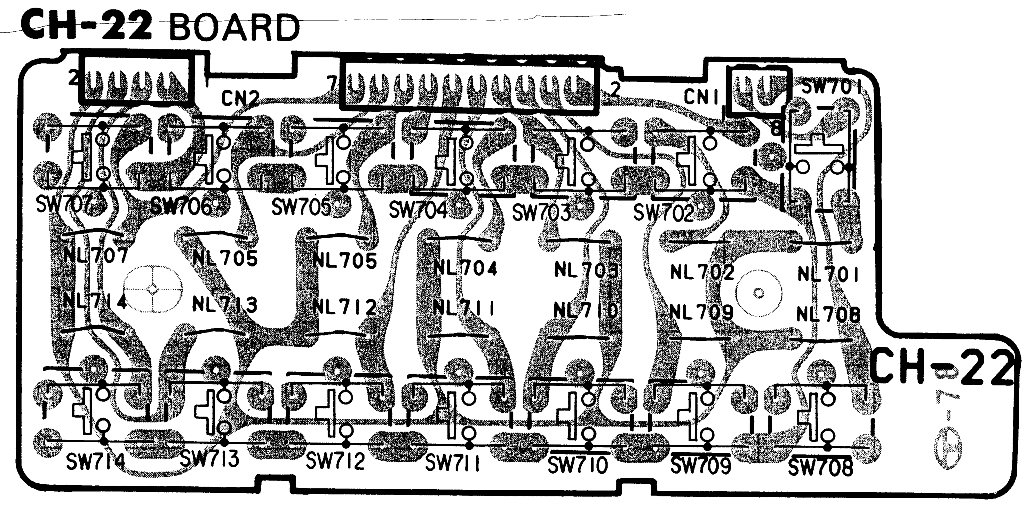

CH-21 BOARD
CN2
CN10
D751
D752
D753
D754
R753
R752
S751
D755
D756
D757
D758
D759
S755
R755
S753
R756
R758
R759
IC701
R754
S754
S752
C701
CH-21
1-605-581-22

SCHEMATIC DIAGRAM

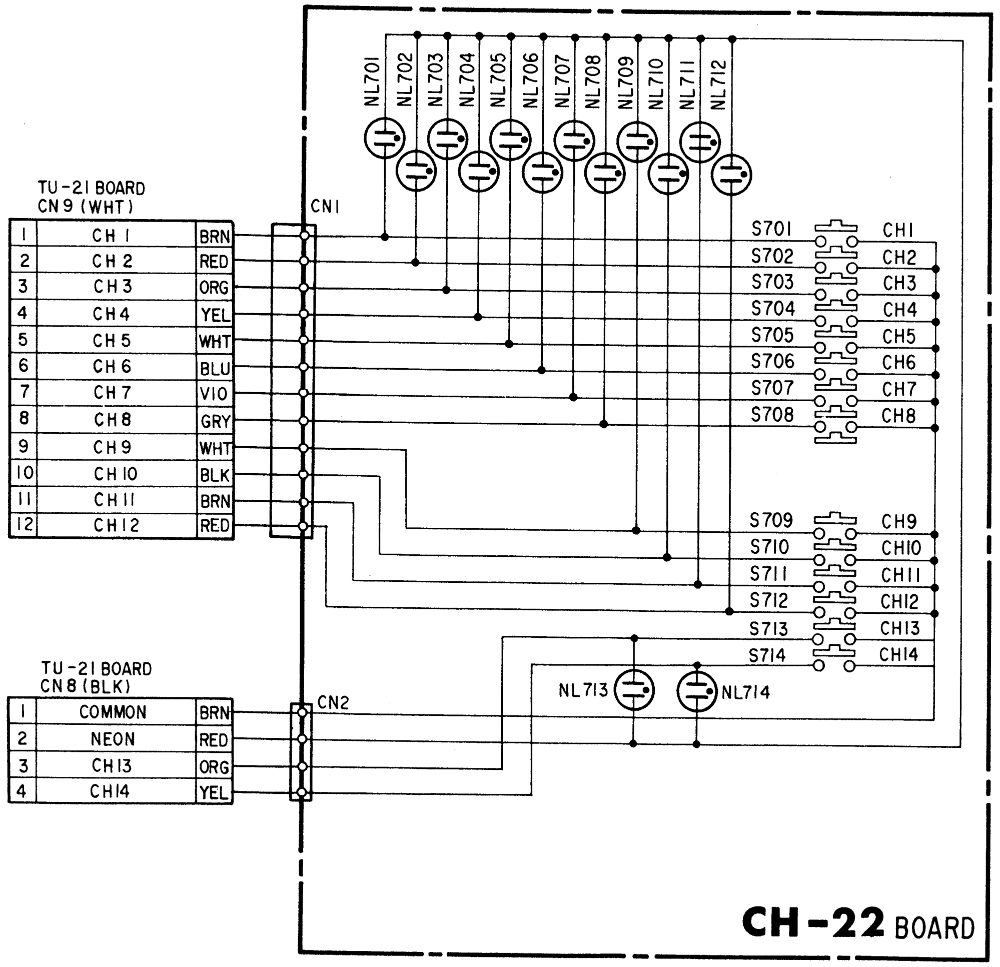

CH-21 BOARD
TU-21 BOARD CN10
1 MODE BRN
2 CH UP RED
3 CH DOWN ORG
4 CLEAR YEL
5 GND(12V) WHT
CN2 (RED)
TU-21 BOARD CN2
1 LED L BRN
2 LED H RED
3 LED U ORG
4 VC
5 +12V
CN1 (WHT)
D751 TLR123
D752 TLY123
D753 TLG123
D754 1SS119
R754 10k
CLEAR
TUNING –
TUNING +
AFT ON OFF
SERCH OFF ON
S751
S753
S752
S754
S755
D755-759 TLR123
IC701 M51903L
C701 0.047
D751
D752
D753
D754
2-6
7-13
14-83
R752 820
R753 1k
IC701
R758 2.2k
R759 2.2k
R755 2.2k
R756 2.2k
R757 2.2k
D758
D759
D755
D756
D757

When indicating parts by reference number, please include the board name.

CH-22 (CHANNEL SELECTOR)
PRINTED WIRING BOARD – *Ref. No.12000 series* –


CH-22 BOARD
CN2
CN1
SW701
SW707
SW706
SW705
SW704
SW703
SW702
NL707
NL705
NL705
NL704
NL703
NL702
NL701
NL714
NL713
NL712
NL711
NL710
NL709
NL708
SW714
SW713
SW712
SW711
SW710
SW709
SW708
CH-22

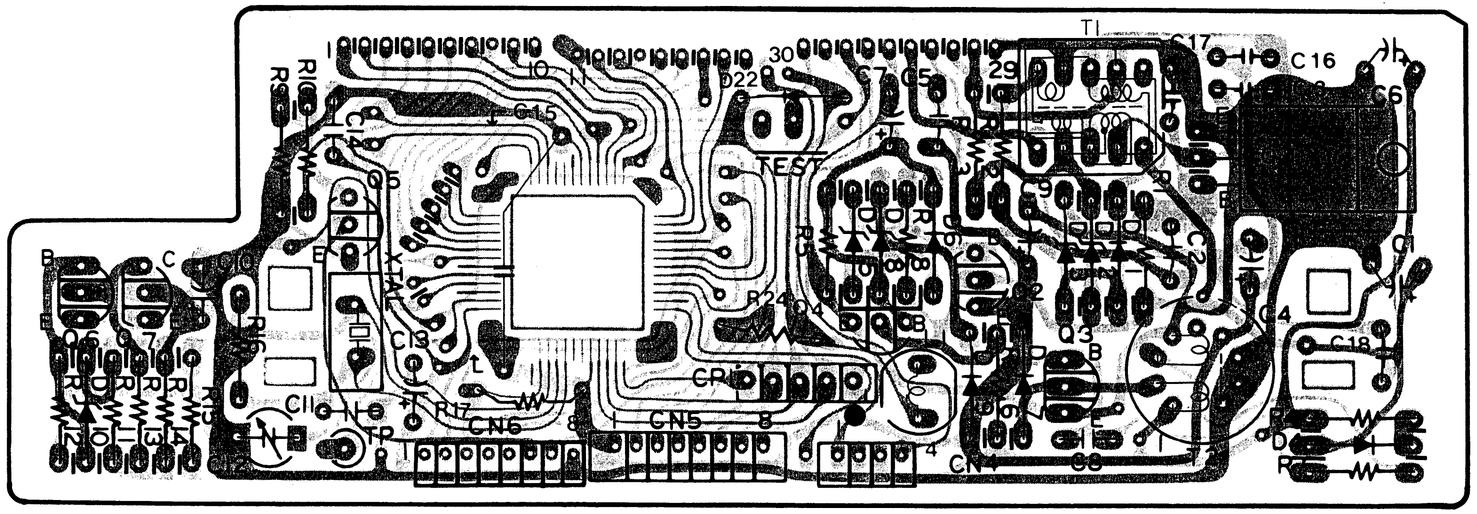
SCHEMATIC DIAGRAM

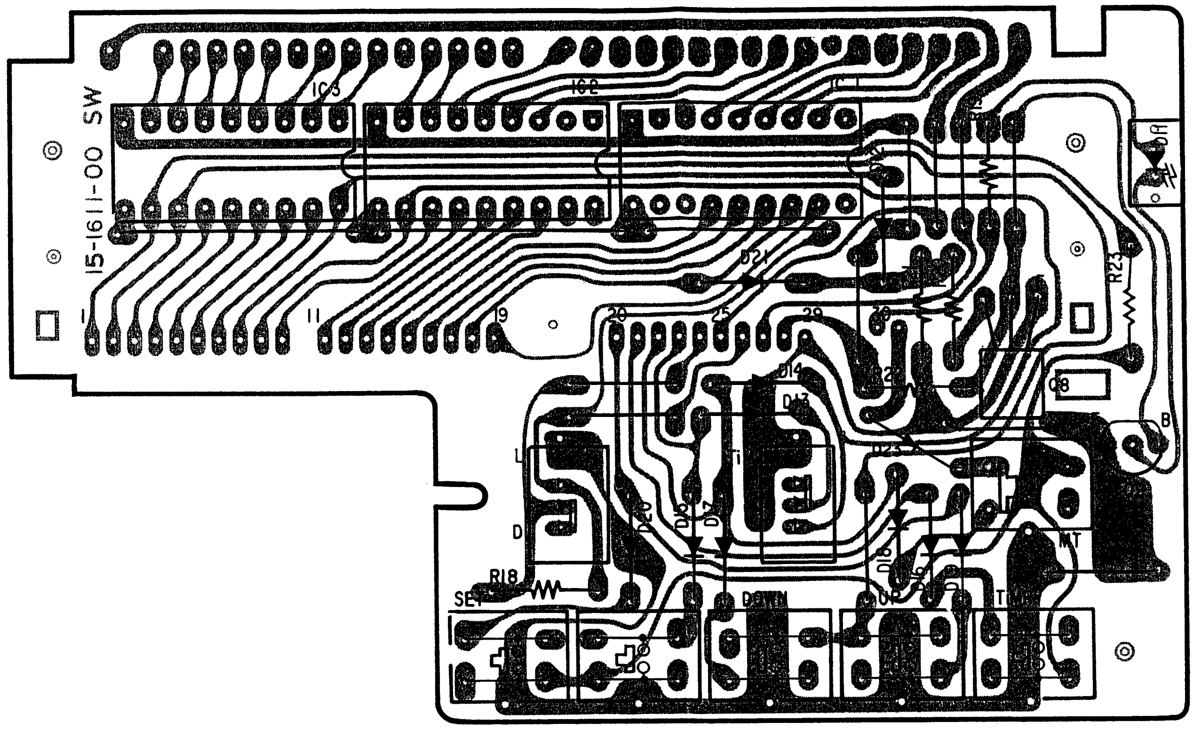

TU-21 BOARD CN9 (WHT)
1 CH 1 BRN
2 CH 2 RED
3 CH 3 ORG
4 CH 4 YEL
5 CH 5 WHT
6 CH 6 BLU
7 CH 7 VIO
8 CH 8 GRY
9 CH 9 WHT
10 CH 10 BLK
11 CH 11 BRN
12 CH 12 RED
CN1
NL701
NL702
NL703
NL704
NL705
NL706
NL707
NL708
NL709
NL710
NL711
NL712
S701 CH1
S702 CH2
S703 CH3
S704 CH4
S705 CH5
S706 CH6
S707 CH7
S708 CH8
S709 CH9
S710 CH10
S711 CH11
S712 CH12
S713 CH13
S714 CH14
TU-21 BOARD CN8 (BLK)
1 COMMON BRN
2 NEON RED
3 CH13 ORG
4 CH14 YEL
CN2
NL713
NL714
CH-22 BOARD

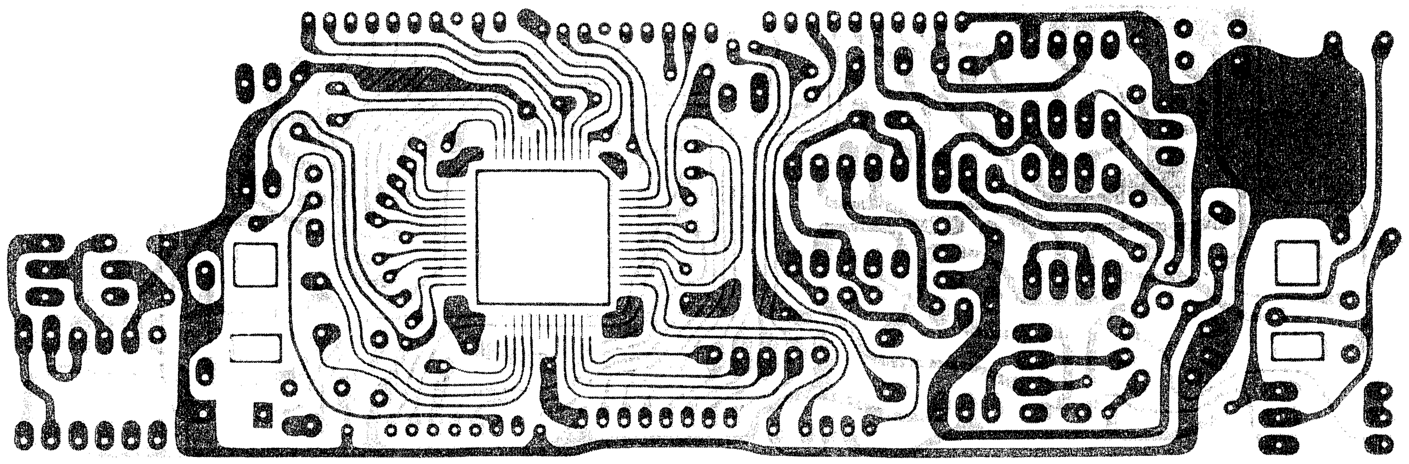
When indicating parts by reference number, please include the board name.

TM-34 (PROGRAM TIMER/TAPE COUNTER) PRINTED WIRING BOARD – *Ref. No.13000 series* –

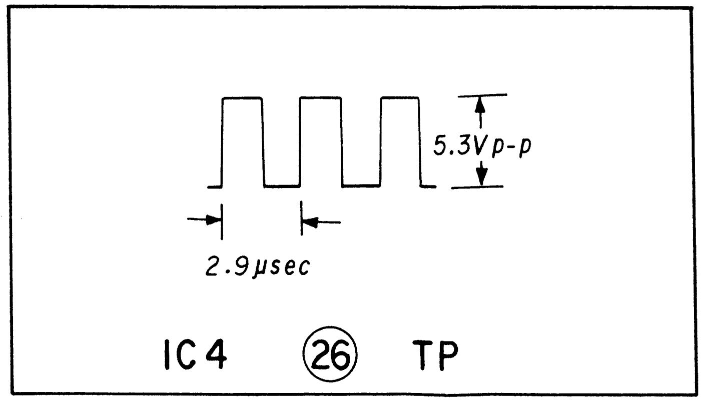
TM-34 BOARD


C15
C16
C17
C18
C11
C13
C6
C7
C5
D22
TEST
XTAL
Q5
Q6
Q7
Q3
R17
R24
CP1
CN6
CN5
CN4
TP
T1
10
11
29
30

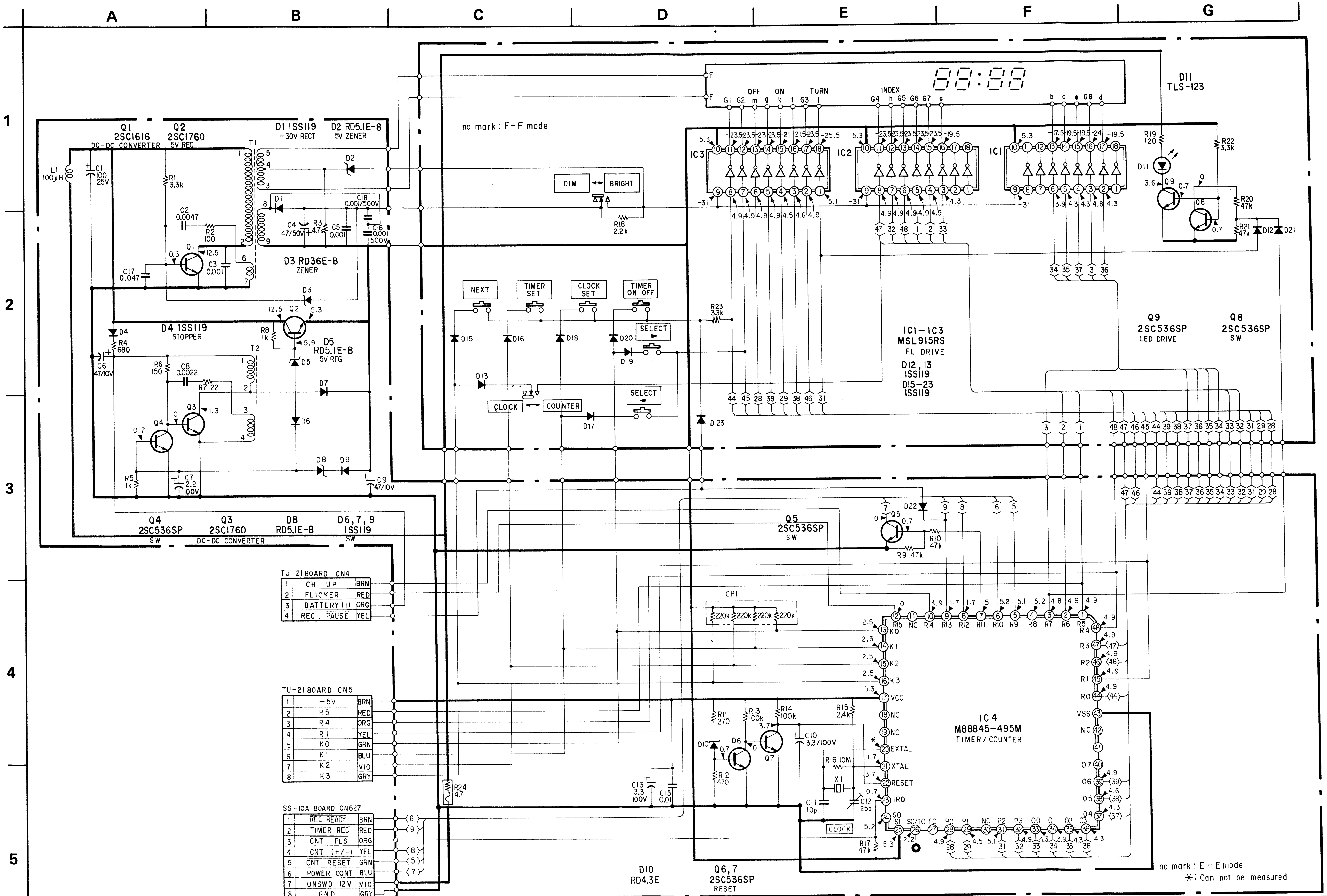

15-1611-00 SW
IC3
IC2
IC1
D21
D23
D14
D13
R23
R18
SET
DOWN
UP
1
11
19
20
25
29
30



TIMER BLOCK


5.3Vp-p
2.9μsec
IC4 ㉖ TP

TM-34 (PROGRAM TIMER/TAPE COUNTER) BOARD SCHEMATIC BOARD *— Ref. No.13000 series —*


A
B
C
D
E
F
G
1
2
3
4
5
Q1 2SC1616 DC-DC CONVERTER
Q2 2SC1760 5V REG
D1 1SS119 -30V RECT
D2 RD5.1E-B 5V ZENER
T1
L1 100μH
C1 100 25V
R1 3.3k
C2 0.0047
R2 100
C17 0.047
C3 0.001
C4 47/50V
R3 4.7k
C5 0.001
C18 0.001/500V
C16 0.001 500V
D3 RD36E-B ZENER
D4 1SS119 STOPPER
R4 680
C6 47/10V
R6 150
C8 0.0022
R7 22
R8 1k
D5 RD5.1E-B 5V REG
T2
D7
D6
D8
D9
C9 47/10V
R5 1k
C7 2.2 100V
Q4 2SC536SP SW
Q3 2SC1760 DC-DC CONVERTER
D8 RD5.1E-B
D6,7,9 1SS119 SW
no mark : E-E mode
DIM
BRIGHT
R18 2.2k
OFF
ON
TURN
INDEX
G1 G2 m g k f G3 i
G4 h G5 G6 G7 a
b c e G8 d
IC3
IC2
IC1
D11 TLS-123
R19 120
R22 3.3k
Q9
Q8
R20 47k
R21 47k
D12
D21
NEXT
TIMER SET
CLOCK SET
TIMER ON OFF
SELECT
D15
D16
D18
D20
D19
D13
CLOCK
COUNTER
D17
R23 33k
D23
IC1–IC3 MSL915RS FL DRIVE
D12,13 1SS119
D15–23 1SS119
Q9 2SC536SP LED DRIVE
Q8 2SC536SP SW
Q5 2SC536SP SW
D22
R10 47k
R9 47k
TU-21 BOARD CN4
1 CH UP BRN
2 FLICKER RED
3 BATTERY (+) ORG
4 REC. PAUSE YEL
TU-21 BOARD CN5
1 +5V BRN
2 R5 RED
3 R4 ORG
4 R1 YEL
5 K0 GRN
6 K1 BLU
7 K2 VIO
8 K3 GRY
SS-10A BOARD CN627
1 REC READY BRN
2 TIMER·REC RED
3 CNT PLS ORG
4 CNT (+/-) YEL
5 CNT RESET GRN
6 POWER CONT BLU
7 UNSWD 12V VIO
8 GND GRY
R24 4.7
CP1 220k 220k 220k 220k
R11 270
R12 470
R13 100k
R14 100k
R15 2.4k
D10
Q6
Q7
C10 3.3/100V
R16 10M
X1
C11 10p
C12 25p
CLOCK
R17 47k
C13 3.3 100V
C15 0.01
IC4 M88845-495M TIMER/COUNTER
R15 NC R14 R13 R12 R11 R10 R9 R8 R7 R6 R5
K0 K1 K2 K3 VCC NC NC EXTAL XTAL RESET IRQ SO SI SC/TO TC P0 P1 NC P2 P3 O0 O1 O2 O3
R4 R3 R2 R1 R0 VSS NC O7 O6 O5 O4
D10 RD4.3E
Q6,7 2SC536SP RESET
no mark : E-E mode
✱: Can not be measured

When indicating parts by reference number, please include the board name.

SR-11A (POWER SUPPLY) PRINTED WIRING BOARD *– Ref. No.14000 series –*

A B C D E F G

1

IC	IC3 IC2 IC1
Q	3 4 5 2 1
D	8 13 10 6 11 12 9 7 5 4 3 1 2
ADJ	RV3 RV1 RV2

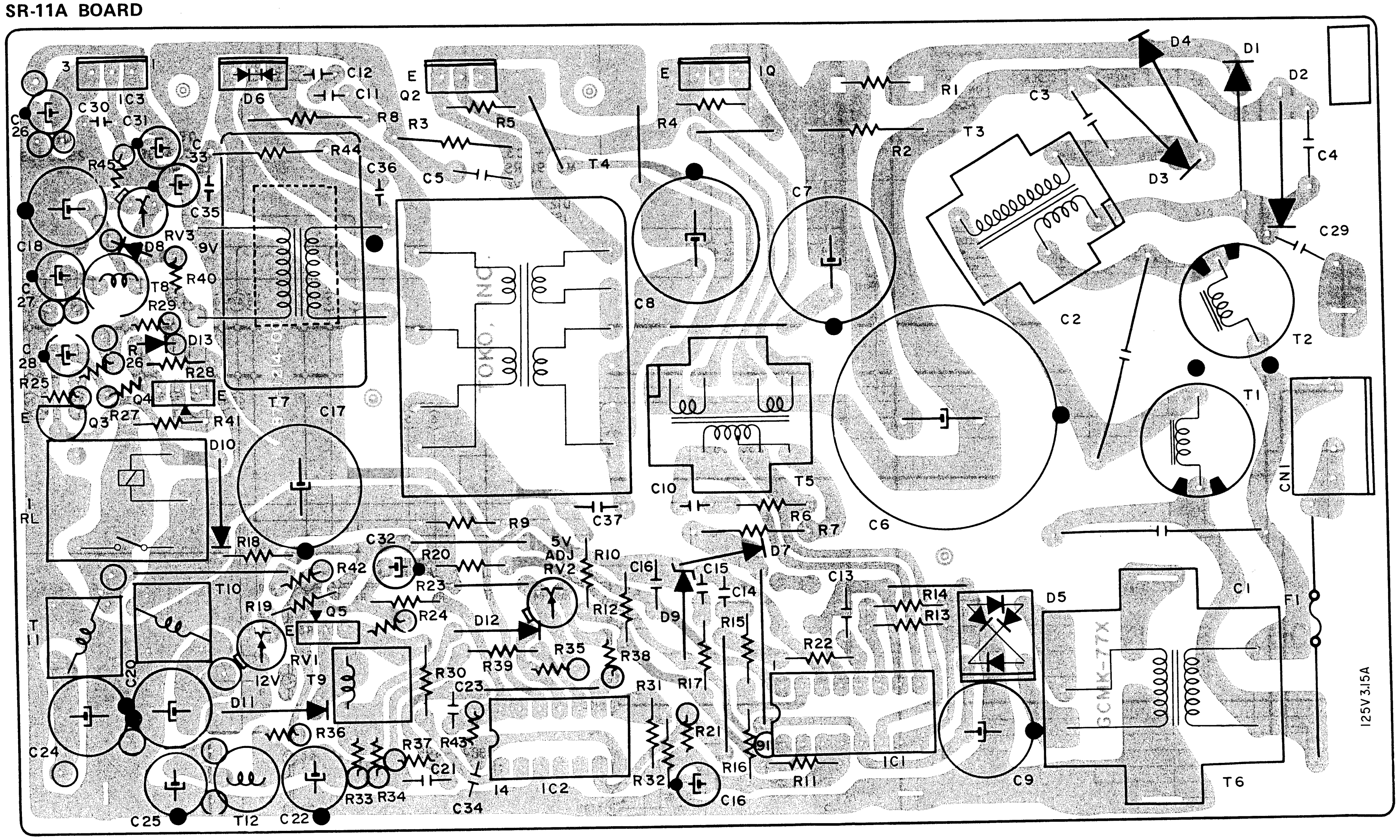
2

3

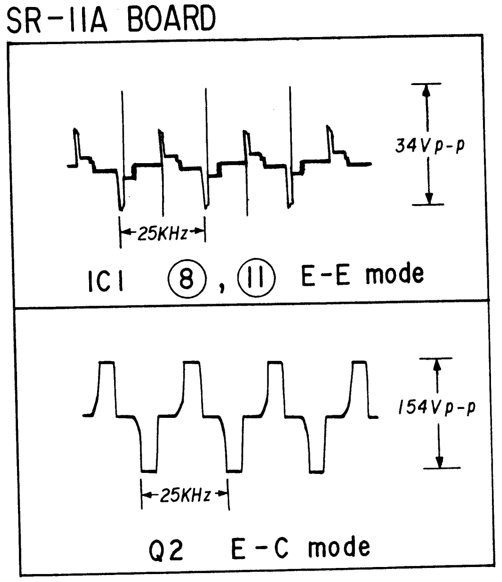
4

5

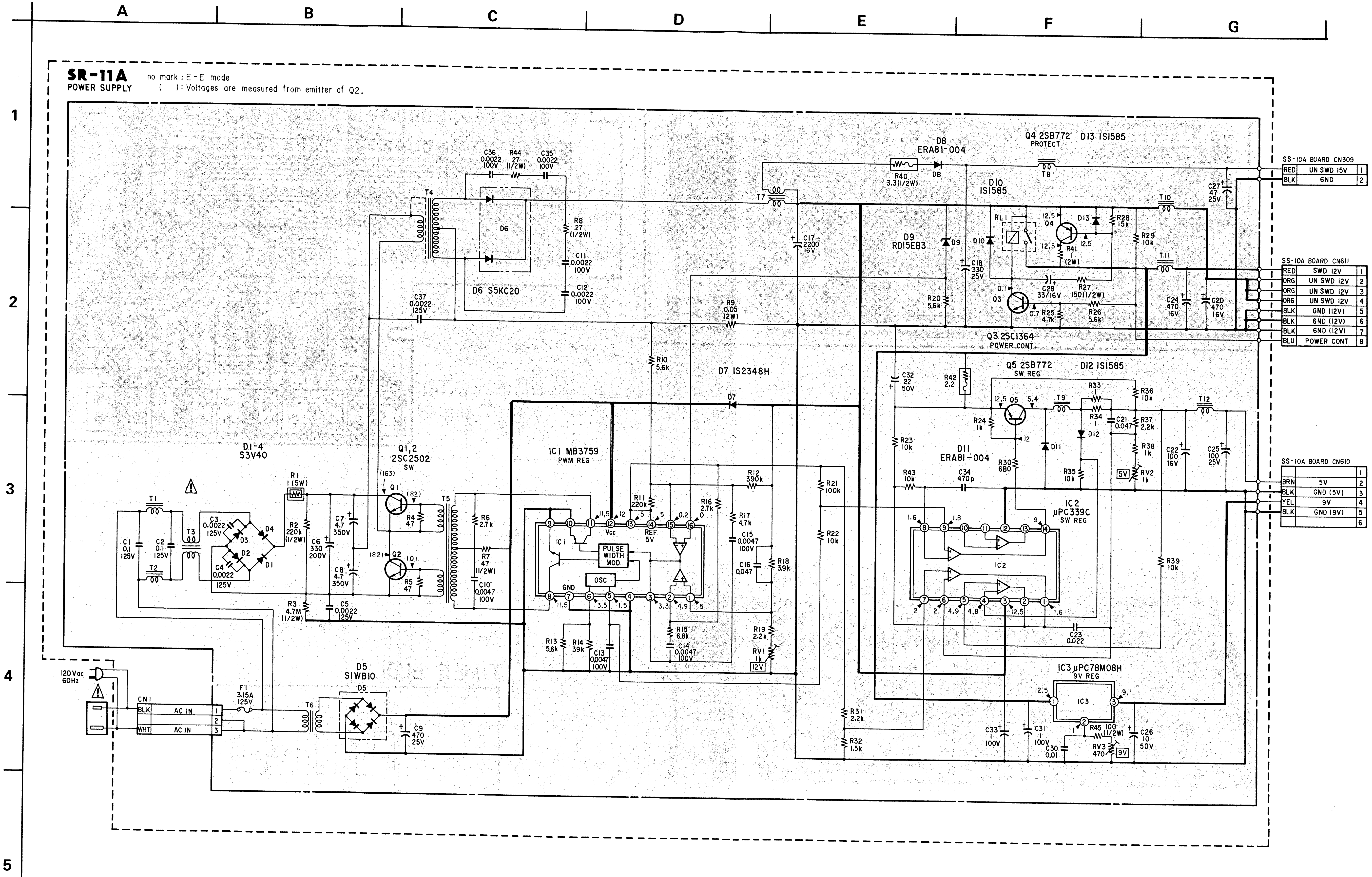
SR-11A BOARD



IC3
C30
C31
C26
C33
R45
C35
RV3
9V
D8
C18
R40
T8
R29
C27
D13
C28
R26
R28
R25
Q4
Q3
R27
R41
E
D10
RL
R18
T10
R42
R19
Q5
RV1
-12V
T11
C20
T9
D11
R36
C24
C25
T12
C22
R37
R43
R33
R34
C21
C34
D6
C12
C11
R8
R44
C36
Q2
R3
R5
C5
T4
T7
C17
TOKO, INC.
R9
C37
C32
R20
R23
R24
5V ADJ RV2
R10
D12
R35
R39
R38
R30
C23
14
IC2
IQ
R4
R1
R2
C8
C7
C10
T5
R6
R7
C6
D7
C16
C15
C14
D9
R12
R15
R17
R31
R21
R32
R16
C16
C13
R14
R13
R22
R11
IC1
D5
C9
GCNK-77X
T6
C1
F1
125V 3.15A
T3
C3
D4
D1
D2
C4
D3
C29
C2
T2
T1
CN1



SR-11A (POWER SUPPLY) BOARD SCHEMATIC DIAGRAM – *Ref. No.14000 series* –


A
B
C
D
E
F
G
1
2
3
4
5
SR-11A
POWER SUPPLY
no mark : E-E mode
( ) : Voltages are measured from emitter of Q2.
120Vac 60Hz
CN1
BLK AC IN 1
2
WHT AC IN 3
F1 3.15A 125V
T1
T2
T3
C1 0.1 125V
C2 0.1 125V
C3 0.0022 125V
C4 0.0022 125V
D1-4 S3V40
D1
D2
D3
D4
R1 1(5W)
R2 220k (1/2W)
R3 4.7M (1/2W)
C5 0.0022 125V
C6 330 200V
C7 4.7 350V
C8 4.7 350V
Q1,2 2SC2502 SW
Q1
Q2
(163)
(82)
(0)
R4 47
R5 47
T5
R6 2.7k
R7 47 (1/2W)
C10 0.0047 100V
C37 0.0022 125V
T4
C36 0.0022 100V
R44 27 (1/2W)
C35 0.0022 100V
D6
D6 S5KC20
R8 27 (1/2W)
C11 0.0022 100V
C12 0.0022 100V
D5 S1WB10
D5
T6
C9 470 25V
R9 0.05 (2W)
R10 5.6k
D7 1S2348H
D7
IC1 MB3759 PWM REG
IC1
Vcc
REF 5V
PULSE WIDTH MOD
OSC
GND
11.5
12
5
0.2
3.5
1.5
3.3
4.9
R11 220k
R12 390k
R13 5.6k
R14 39k
C13 0.0047 100V
R15 6.8k
C14 0.0047 100V
R16 2.7k
R17 4.7k
C15 0.0047 100V
C16 0.047
R18 3.9k
R19 2.2k
RV1 1k
12V
R21 100k
R22 10k
R31 2.2k
R32 1.5k
T7
C17 2200 16V
D8 ERA81-004
D8
R40 3.3(1/2W)
T8
D9 RD15EB3
D9
D10 1S1585
D10
RL1
Q4 2SB772 PROTECT
D13 1S1585
Q4
D13
12.5
R28 15k
R41 1 (2W)
R29 10k
C18 330 25V
C28 33/16V
R27 150(1/2W)
R20 5.6k
Q3
0.1
0.7
R25 4.7k
R26 5.6k
Q3 2SC1364 POWER CONT
C27 47 25V
T10
T11
C24 470 16V
C20 470 16V
SS-10A BOARD CN309
RED UN SWD 15V 1
BLK GND 2
SS-10A BOARD CN611
RED SWD 12V 1
ORG UN SWD 12V 2
ORG UN SWD 12V 3
ORG UN SWD 12V 4
BLK GND (12V) 5
BLK GND (12V) 6
BLK GND (12V) 7
BLU POWER CONT 8
C32 22 50V
R42 2.2
Q5 2SB772 SW REG
D12 1S1585
Q5
5.4
T9
R33
R36 10k
R34
C21 0.047
R37 2.2k
D12
R24 1k
D11
D11 ERA81-004
R23 10k
R30 680
R38 1k
R35 10k
RV2 1k
5V
T12
C22 100 16V
C25 100 25V
R43 10k
C34 470p
IC2 μPC339C SW REG
IC2
1.6
1.8
4.8
R39 10k
C23 0.022
SS-10A BOARD CN610
1
BRN 5V 2
BLK GND (5V) 3
YEL 9V 4
BLK GND (9V) 5
6
IC3 μPC78M08H 9V REG
IC3
9.1
C33 1 100V
C31 1 100V
C30 0.01
R45 100 (1/2W)
RV3 470
9V
C26 10 50V

When indicating parts by reference number, please include the board name.

SECTION 5

EXPLODED VIEWS

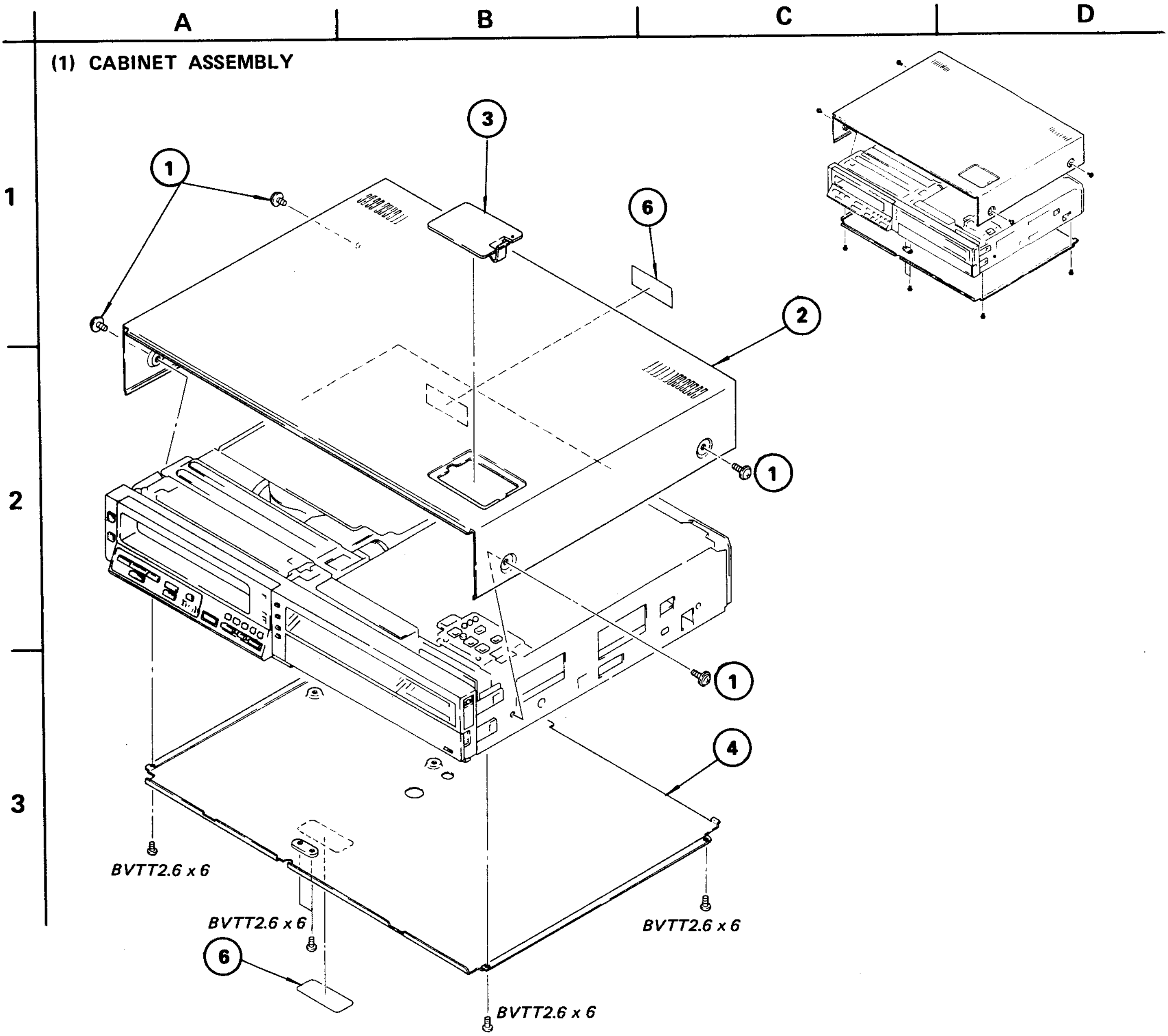
NOTE:
- Items with no part number and no description are not stocked because they are seldom required for routine service.
- The construction parts of an assembled part are indicated with a collation number in the remark column.
- As to the part numbered with E-, refer to the electrical parts list.
- Items marked " ♠ " are not stocked since they are seldom required for routine service. Some delay should be anticipated when ordering these items.

The components identified by shading and mark ⚠ are critical for safety. Replace only with part number specified.

Les composants identifiés par une trame et une marque ⚠ sont critiques pour la sécurité. Ne les remplacer que par une pièce portant le numéro spécifié.

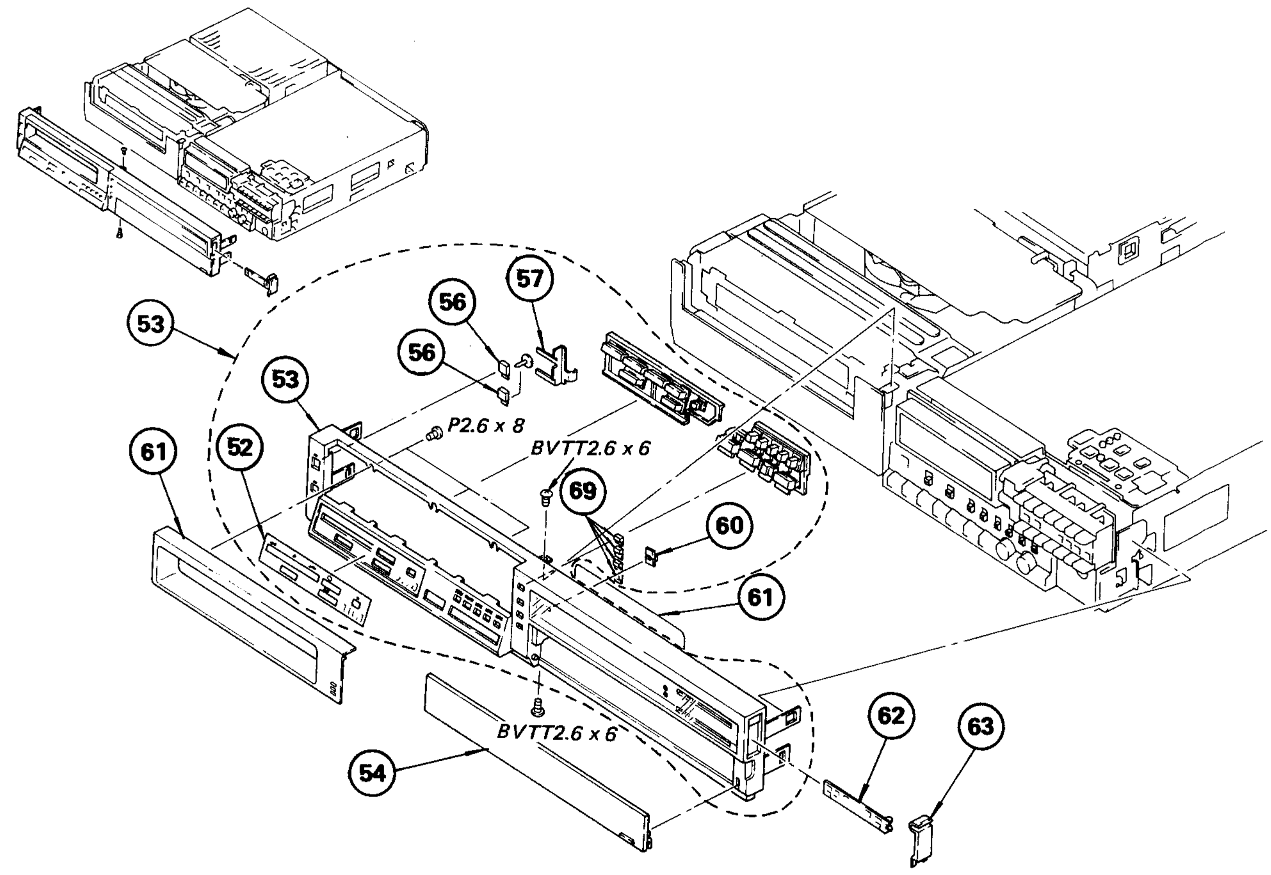
When indicating parts by reference number, please include the board name.

(1) CABINET ASSEMBLY



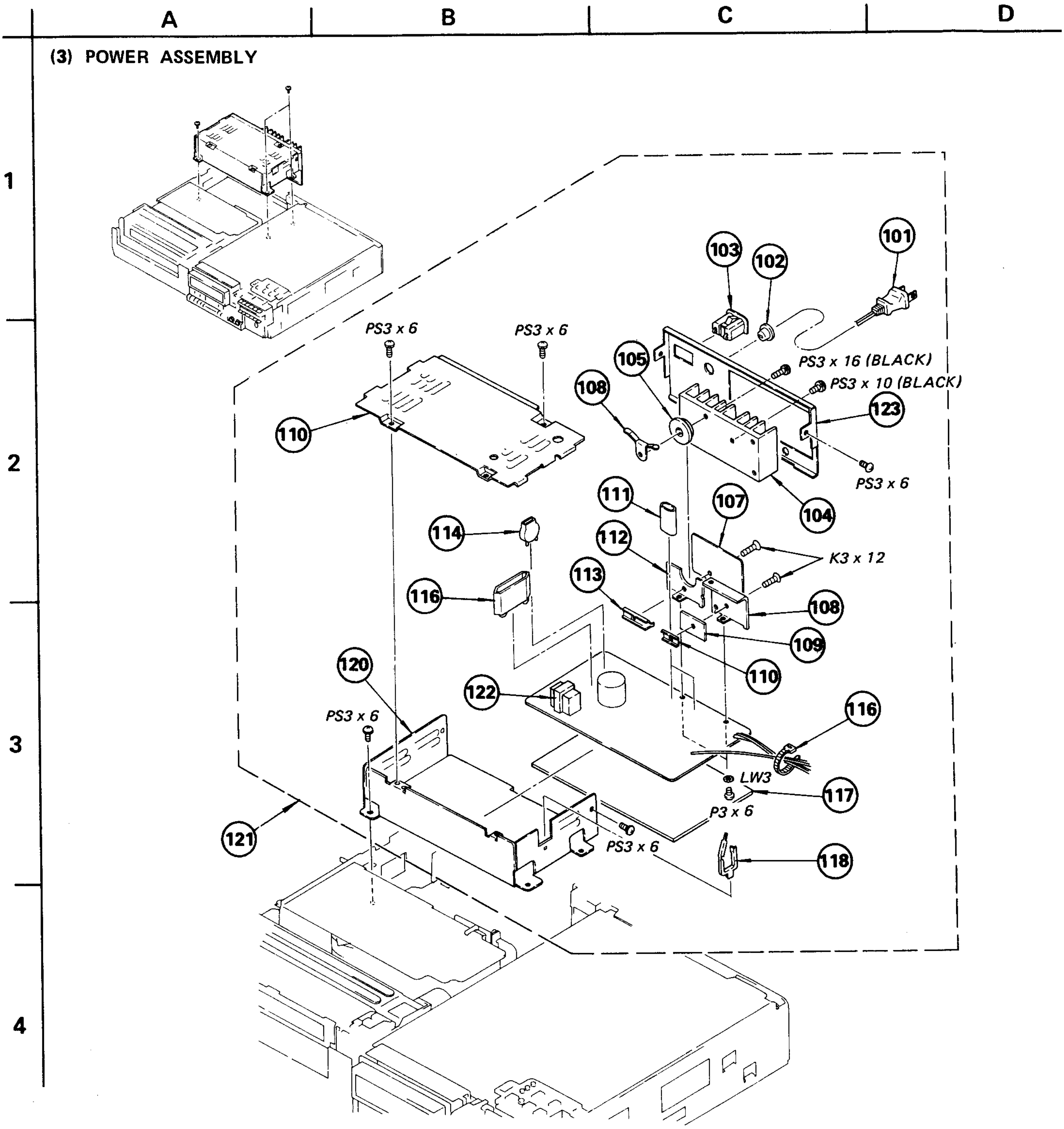
No.	Part No	Description	Remark
1	3-703-354-11	SCREW (OS), CASE, CLAW	
2	X-3670-047-0	CASE ASSY	
3	4-342-123-00	DOOR, PRESET	
4	X-3670-039-0	PLATE ASSY, BOTTOM	5
5	3-703-043-21	LABEL, MAIN COUTION	
6	♠ :3-671-881-00	LABEL, MODEL NUMBER	

(2) FRONT ASSEMBLY


A
B
C
D
1
2
3
53
56
57
56
53
P2.6 x 8
BVTT2.6 x 6
61
52
69
60
61
62
63
BVTT2.6 x 6
54

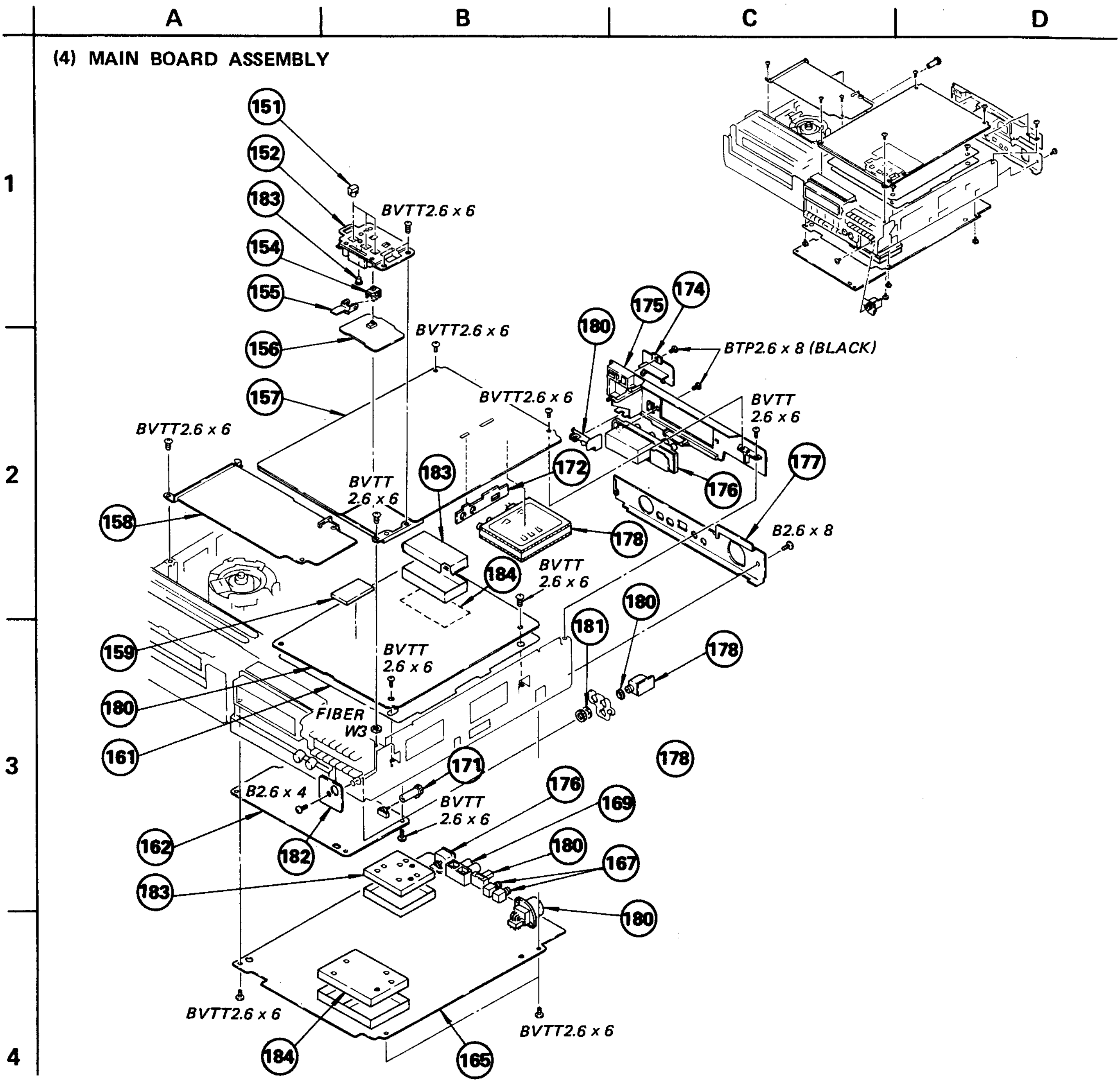
No.	Part No	Description	Remark
51	X-3670-038-0	GUIDE ASSY, ENTRANCE, CASSETTE	
52	3-670-176-00	PLATE, ORNAMENTAL, BUTTON, FU	
53	X-3670-054-0	PANEL ASSY, FRONT 52, 55—57. 59. 60	
54	X-3670-050-0	DOOR ASSY, FRONT	
55	3-670-082-11	BUTTON, PE	
56	3-670-082-00	BUTTON, PE	
57	3-670-080-00	SPRING, LEAF (PE)	
59	3-670-074-00	BUTTON, COUNTER	
60	♦ :3-670-075-D0	LED COVER, TIMER RECORD	
61	3-671-861-00	COVER, TIMER	
62	3-670-122-00	HOLDER, INDICATOR	
63	3-670-087-00	FRONT (RIGHT)	

(3) POWER ASSEMBLY


A
B
C
D
1
2
3
4
PS3 x 6
PS3 x 6
110
103
102
101
105
PS3 x 16 (BLACK)
PS3 x 10 (BLACK)
108
123
PS3 x 6
104
111
107
114
112
K3 x 12
113
116
108
109
110
120
122
116
PS3 x 6
LW3
117
P3 x 6
121
PS3 x 6
118

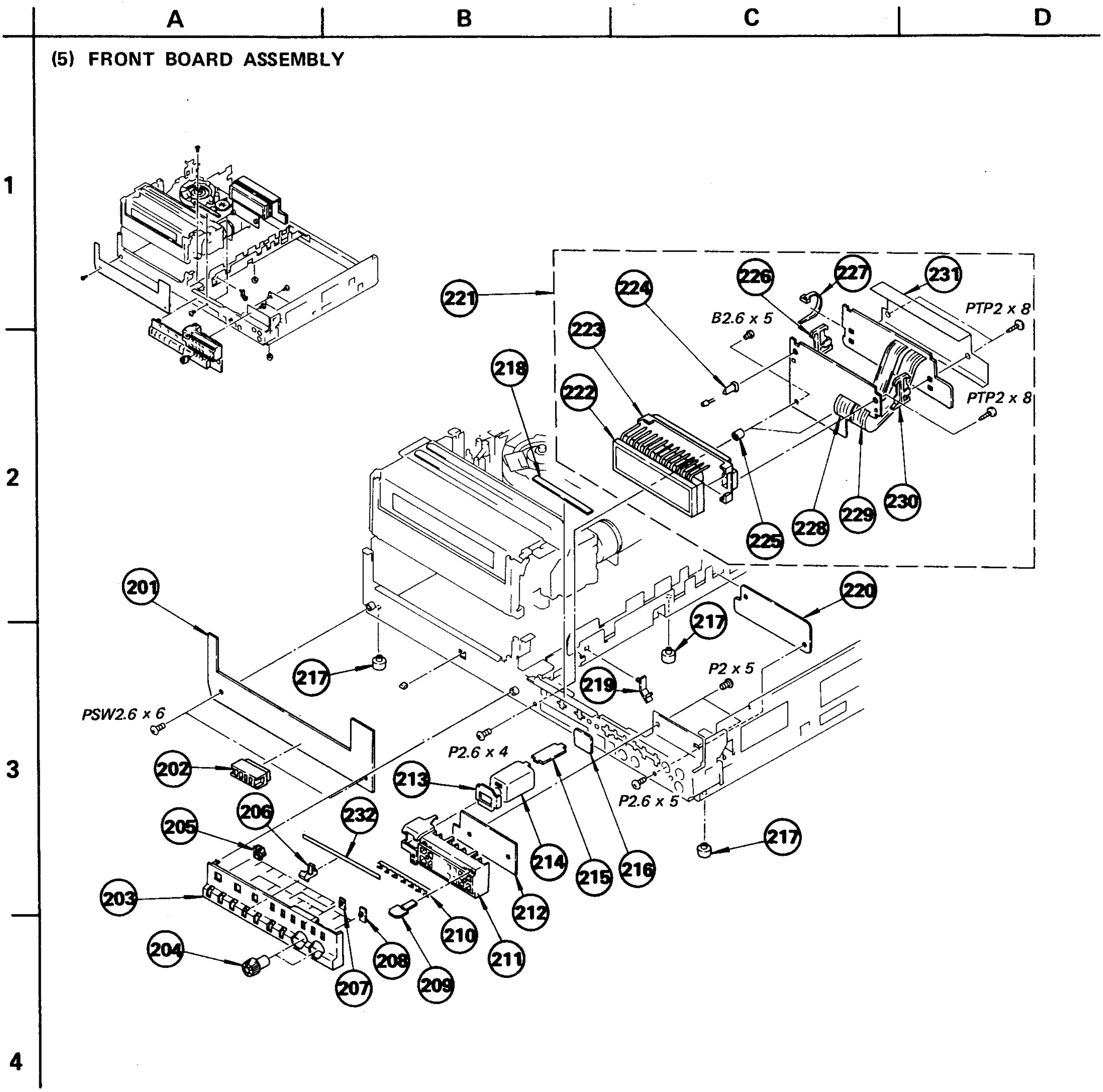
No.	Part No	Description	Remark
101	⚠.1-551-964-00	CORD, POWER	
102	⚠.2-231-019-00	GROMMET, STRAIN RELIEF	
♠103	⚠:1-561-347-00	SOCKET, AC	
104	♠:9-982-200-00	HEAT SINK, FIN	
105	2-291-522-00	WASHER INSULATING	
106	♠:9-982-213-00	BRACKET, UP	
107	9-982-204-00	SHEET, INSULATING	
108	♠:9-982-202-0D	HEAT SINK, SP	
109	9-982-203-00	SHEET, INSULATING	
110	♠:9-982-02I-00	RETAINER, SP	
111	2-291-517-D0	SHEET INSULATING, UP TO, 3	
112	♠:2-291-515-00	HEAT SINK, UP	
113	♠:2-291-519-D0	RETAINER, UP	
114	♠:2-291-547-00	COVER, CAPACITOR	
115	♠:4-316-137-00	COVER, CAPACITOR	
116	♠:3-701-748-00	CLAMP, HARNESS	
117	♠:9-982-208-00	PLATE, INSULATING	
118	♠:4-316-015-00	CLAMP, HARNESS	
119	♠:9-982-197-00	CASE, UPPER	
120	♠:9-982-198-00	CASE, LOWER	
121	⚠ 1-413-081-11	POWER BLOCK (SR-11A)	101,102,103,104,105 106,107,108,109,110 111,112,113,114,115 116,117,118,119,120 122,123
122	⚠ 1-447-197-00	TRANSFORMER, POWER	
123	♠:9-982-265-00	PANEL, CASE	

(4) MAIN BOARD ASSEMBLY


A
B
C
D
1
2
3
4
151
152
183
154
155
156
157
BVTT2.6 x 6
BVTT2.6 x 6
BVTT2.6 x 6
BVTT2.6 x 6
175
174
180
BTP2.6 x 8 (BLACK)
BVTT 2.6 x 6
158
BVTT 2.6 x 6
183
172
177
176
178
B2.6 x 8
184
BVTT 2.6 x 6
180
181
159
BVTT 2.6 x 6
178
180
FIBER W3
161
178
171
176
B2.6 x 4
BVTT 2.6 x 6
169
162
182
180
167
183
180
BVTT2.6 x 6
BVTT2.6 x 6
184
165

No.	Part No	Description	Remark
151	2-291-041-00	BUTTON (A), PRESET	
152	X-3670-025-0	PRESET ASSY	151,153
153	3-669-528-00	CAP, BUTTON	
154	3-670-148-00	KEY (P), SLIDE	
155	3-670-138-00	LEVER, RELEASE	
156	♠ :1-605-581-00	CH-21 BOARD	
157	♠ :A-6721-086-A	TU-21 BOARD, COMPLETE	
158	♠ :A-6717-236-A	RR-1A BOARD, COMPLETE	
159	♠ :1-606-231-00	MB-3 BOARD	
160	♠ :A-6715-131-A	SS-10A BOARD, COMPLETE	
161	♠ :3-670-123-00	INNER, INSULATOR	
162	♠ :A-6711-323-A	VL-3 BOARD, COMPLETE	
163	♠ :3-671-855-D0	LID, CASE, SHIELD, VA-A	
164	♠ :3-671-852-00	LID, CASE, SHIELD, VA-V	
165	♠ :A-6711-314-A	VA-3Z BOARD, COMPLETE	
166	1-561-690-00	CONNECTOR, CAMERA 14P	
167	1-507-251-XX	JACK	
168	1-552-821-00	SWITCH, SLIDE	
169	1-507-742-00	JACK, PIN 2P	
170	1-561-703-00	CONNECTOR, DIN 8P	
171	3-670-149-00	KNOB, V SYNCHRONOUS	
172	♠ :1-605-575-00	TU-22 8OARD	
173	1-463-377-00	TUNER (8T-864)	
174	2-291-019-00	LID, BOOSTER	
175	3-670-160-11	PANEL (UPPER), REAR	
176	1-536-672-41	TERMINAL BOARD (WITH ANT SW)	
177	3-671-808-03	PANEL (LOWER), REAR	
178	♠ :1-606-272-00	MI-2 BOARD	
179	1-507-285-00	JACK	
180	3-670-164-00	SPACER, JACK	
181	3-701-444-11	WASHER, 6	
182	♠ :3-670-171-00	PLATE (SMALL), ORNAMENTAL	
183	♠ :X-3670-043-0	LID ASSY, SS-10 SHIELD CASE	
184	♠ :X-3670-042-0	LID ASSY, REAR, SHIELD CASE	
185	♠ :3-671-857-00	PLATE, GROUND	

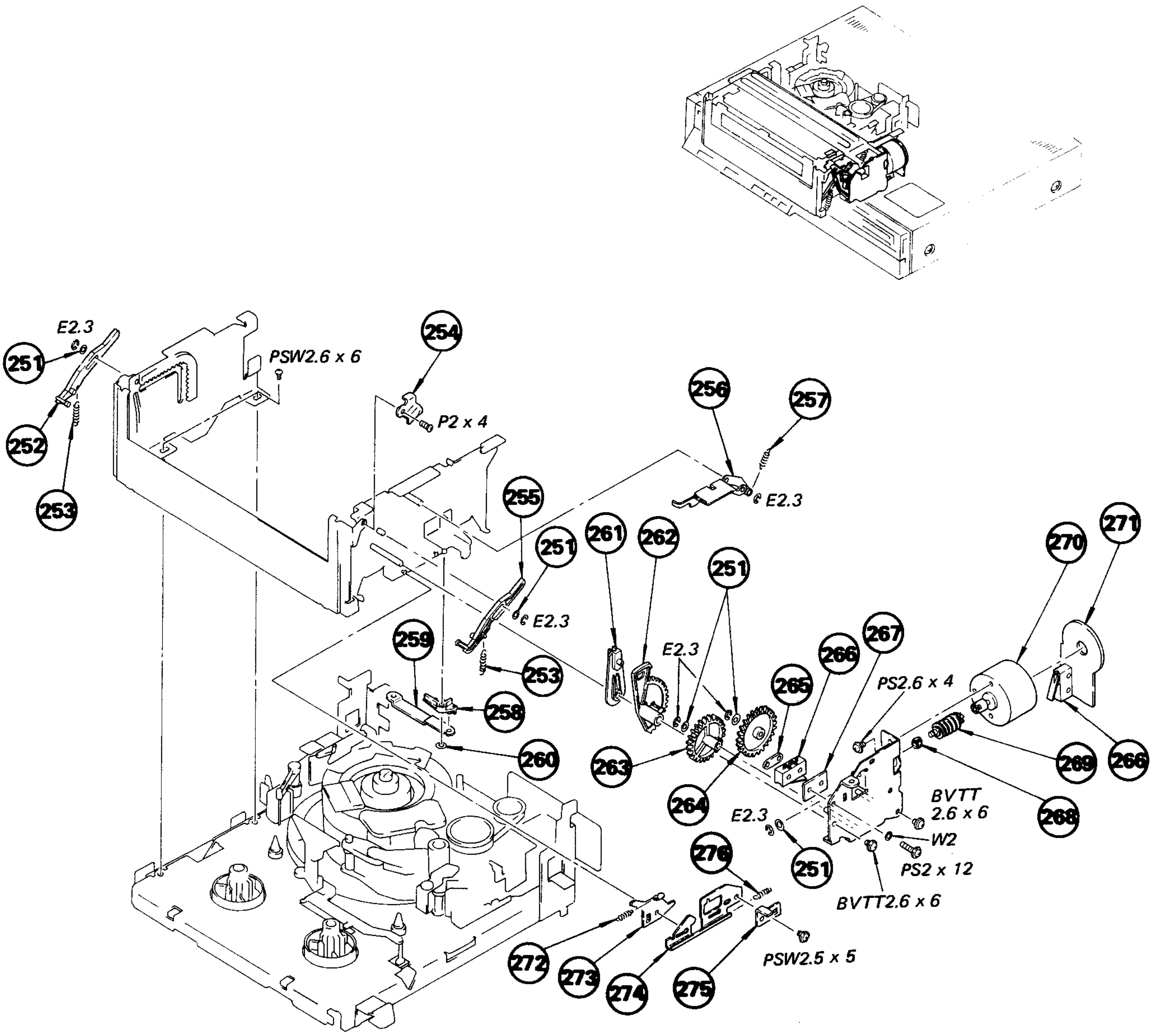
(5) FRONT BOARD ASSEMBLY


A
B
C
D
1
2
3
4
221
224
226
227
231
B2.6 x 5
PTP2 x 8
223
218
222
PTP2 x 8
225
228
229
230
201
220
217
217
P2 x 5
219
PSW2.6 x 6
P2.6 x 4
202
213
P2.6 x 5
205
206
232
214
215
216
217
203
212
210
204
208
211
207
209

No.	Part No	Description	Remark
201	● :A-6717-225-A	FU-3 BOARD, COMPLETE	
202	● :3-670-094-00	HOLDER, LED, 6 GANG	
203	X-3670-051-0	PANEL ASSY, SUB, FRONT	
204	3-670-093-00	KNOB, TRACK CONTROL	
205	3-670-091-00	KEY (B), TACT	
206	3-670-090-00	KEY (A), TACT	
207	3-670-089-00	KEY (B), SLIDE	
208	3-670-088-00	KEY (A), SLIDE	
209	2-291-024-00	BUTTON, TUNER	
210	● :2-291-025-00	SPRING, LEAF	
211	3-670-159-00	FRAME, TUNER	
212	● :1-605-895-00	CH-22 BOARD	
213	● :3-671-831-00	COVER, RAY CATCHER BLOCK	
214	● :4-342-117-00	CASE, SHIELD (MAIN), R	
215	● :1-603-976-00	N BOARD	
216	● :4-342-118-00	LID, SHIELD CASE, R	
217	3-670-155-00	LEG	

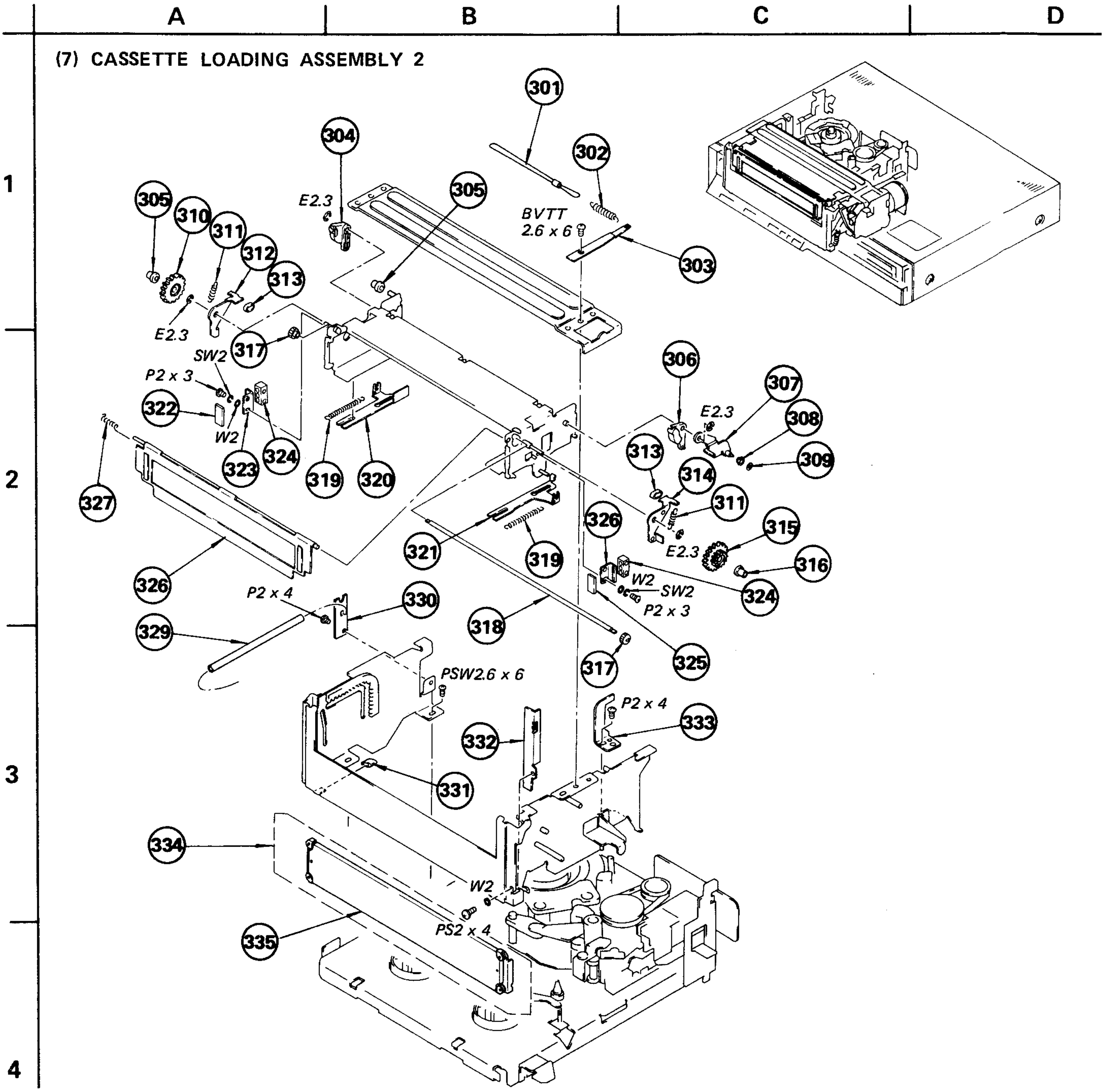
No.	Part No	Description	Remark
218	● :3-670-142-00	INSULATOR, TIMER	
219	● :3-701-832-00	HINGE, CIRCUIT 80ARO	
220	● :1-605-410-00	SW-12 BOARD	
221	1-548-552-12	TIMER BLOCK	222,223,224,225,226 227,228,229,230,231
222	● :9-982-255-00	FLUORESCENT DISPLAY	
223	● :9-982-256-00	HOLDER, INDICATION TU8E	
224	● :9-982-259-00	HOLDER, LED	
225	● :9-982-257-00	SPACER, PC 80ARD	
226	● :9-982-245-00	HOLDER, PC 80ARD	
227	3-701-748-00	CLAMP, HARNESS	
228	● :9-982-061-00	CA8LE, RI8BON 9P	
229	● :9-982-260-00	CA8LE, RIB8ON 10P	
230	● :9-982-254-00	HOLDER, PC 80ARD	
231	● :9-982-253-00	CASE ASS'Y SHIELD	
232	● :3-671-865-00	CUSHION, BUTTON	

(6) CASSETTE LOADING ASSEMBLY 1


1
2
3
4
251
E2.3
252
253
PSW2.6 x 6
254
P2 x 4
256
257
E2.3
255
251
E2.3
261
262
251
270
271
259
253
258
260
E2.3
267
266
265
PS2.6 x 4
263
264
269
266
268
BVTT
2.6 x 6
E2.3
W2
251
276
PS2 x 12
BVTT2.6 x 6
272
273
274
275
PSW2.5 x 5

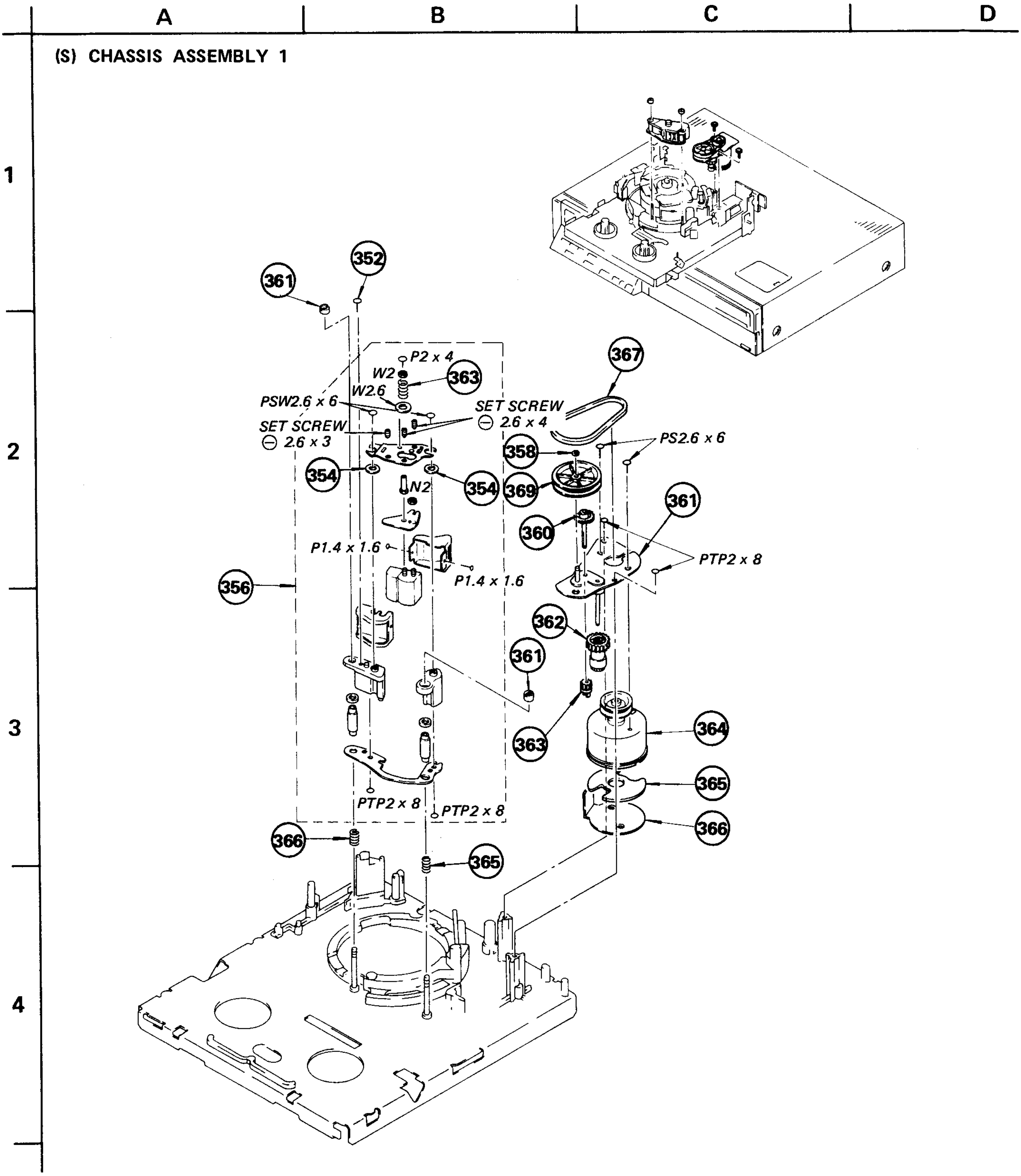
No.	Part No	Description	Remark
251	3-701-439-21	WASHER	
252	3-670-056-00	ARM (L), DOOR	
253	3-500-130-00	SPRING, TENSION	
254	♠ :3-671-819-00	COVER, SECTOR GEAR	
255	3-670-057-00	ARM (R), DOOR	
256	♠ :3-670-152-00	ARM, LOCK, UP	
257	3-536-767-XX	SPRING, TENSION	
258	3-670-001-00	LEVER, UNLOCK	
259	3-670-034-00	JOINT, UNLOCK	
260	3-669-465-00	WASHER (1.5), STOPPER	
261	3-670-136-00	ARM, HOLDER DRIVING	
262	3-670-151-00	GEAR, SECTOR	
263	3-670-016-00	GEAR (A)	
264	♠ :3-670-015-00	WHEEL, WORM	
265	♠ :3-646-476-00	NUT, PLATE	
266	1-552-664-00	SWITCH, MICRO	
267	3-534-263-00	INSULATOR	
268	♠ :3-670-168-00	BEARING, WORM	
269	X-3670-001-0	WORM ASSY	
270	X-3670-002-0	MOTOR ASSY, FL	
271	♠ :A-6728-246-A	LM-9 BOARD, COMPLETE	
272	3-530-248-XX	SPRING, TENSION	
273	♠ :3-670-010-00	STOPPER, LOCK	
274	♠ :3-670-009-00	PLATE, LOCK	
275	♠ :3-670-011-00	PLATE, ADJUSTMENT, CD	
276	3-630-615-XX	SPRING, TENSION	

(7) CASSETTE LOADING ASSEMBLY 2


A
B
C
D
1
2
3
4
301
304
302
305
E2.3
BVTT
2.6 x 6
303
305
310
311
312
313
E2.3
317
SW2
P2 x 3
306
307
E2.3
308
322
309
W2
323
324
319
320
313
314
311
327
326
E2.3
315
321
319
W2
SW2
316
324
326
P2 x 4
330
P2 x 3
318
329
325
317
PSW2.6 x 6
P2 x 4
333
332
331
334
W2
PS2 x 4
335

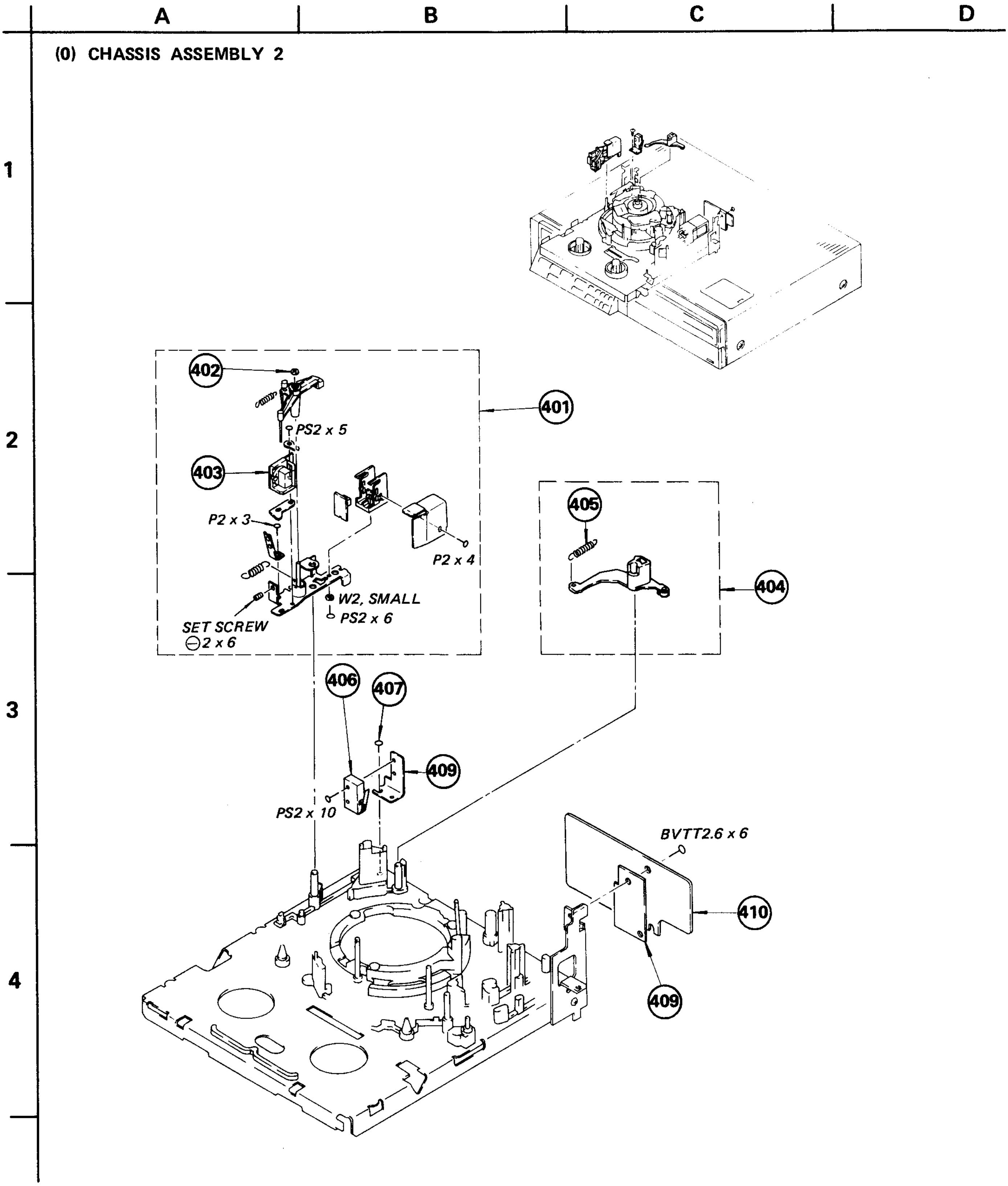
No.	Part No	Description	Remark
301	3-671-863-00	STRING, PULL, WIRE	
302	3-535-021-00	SPRING, TENSION	
303	3-671-864-00	PLATE, SPRING HOOK	
304	3-670-0D3-00	CAM (L), C-IN	
305	3-670-018-00	ROLLER, GUIDE	
306	3-670-004-00	CAM (R), C-IN	
307	♠ :X-3670-005-0	ARM ASSY, OPEN LID	
308	3-670-054-00	ROLLER, OPEN LID	
309	3-669-465-00	WASHER (1.5), STOPPER	
310	3-670-006-00	GEAR (E)	
311	3-670-169-00	SPRING, TENSION	
312	♠ :3-670-031-00	RETAINER (L), CASSETTE	
313	♠ :3-646-334-00	CUSHION	
314	♠ :3-670-041-00	RETAINER (R), CASSETTE	
315	3-670-005-00	GEAR (B)	
316	3-671-878-00	ROLLER (B), GUIDE	
	3-671-892-00	ROLLER (M), GUIDE	
317	3-670-007-00	GEAR (C)	
318	♠ :3-670-053-00	SHAFT, JOINT	
319	3-489-310-XX	SPRING, TENSION	
320	♠ :3-670-036-00	PLATE (L), SLIDE, C	
321	♠ :3-670-037-00	PLATE (R), SLIDE, C	
322	♠ :1-605-111-00	CI-2 BOARD	
323	♠ :3-670-039-00	HOLDER (R), CSW	
324	1-553-719-00	SWITCH, MICRO	
325	♠ :1-605-112-00	CI-3 BOARD	
326	♠ :3-670-038-00	HOLDER (L), CSW	
327	3-670-058-00	SPRING, LEAF	
328	3-670-150-21	PLATE, BLIND	
329	♠ :3-670-170-00	TUBE, RUBBER	
330	♠ :A-672B-247-A	RL-4 BOARD, COMPLETE	
331	3-573-469-00	RETAINER, LEAD, SD	
332	♠ :3-670-032-00	RAIL (R)	
333	♠ :3-670-012-00	OPEN LID	
334	X-3670-044-0	DOOR ASSY, CASSETTE	335
335	3-670-110-11	PLATE, ORNAMENTAL, CASSETTE DOOR	

(S) CHASSIS ASSEMBLY 1


A
B
C
D
1
2
3
4
352
361
P2 x 4
W2
363
W2.6
PSW2.6 x 6
SET SCREW
⊖ 2.6 x 4
SET SCREW
⊖ 2.6 x 3
367
PS2.6 x 6
358
369
354
354
N2
361
360
P1.4 x 1.6
PTP2 x 8
P1.4 x 1.6
356
362
361
364
363
365
366
PTP2 x 8
PTP2 x 8
366
365

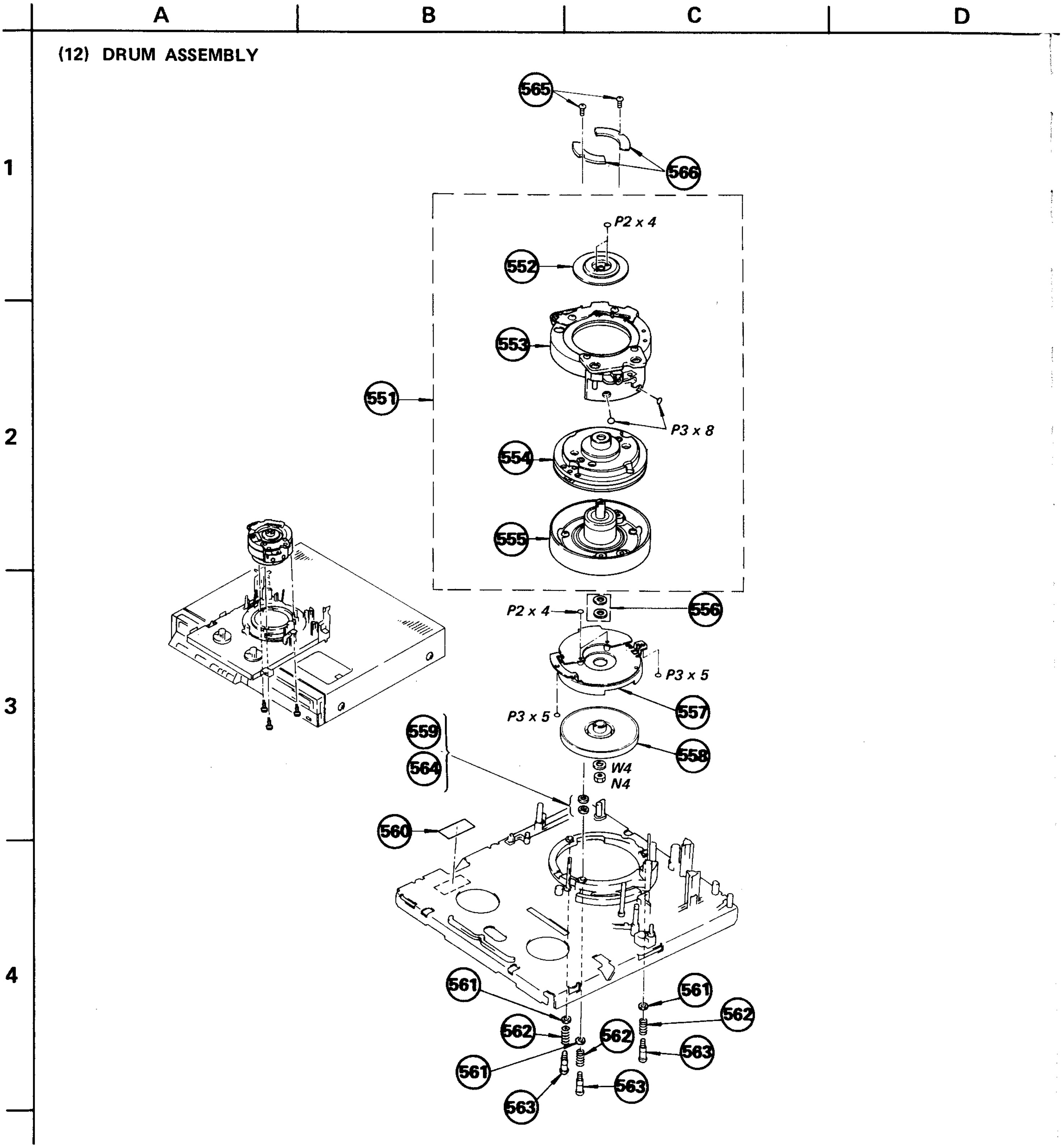
No.	Part No	Description	Remark
351	3-669-318-00	NUT, ADJUSTMENT, GUIDE	
352	3-669-480-11	+ PTPWH 2	
353	♠ :3-669-316-00	SPRING, COMPRESSION	
354	3-669-59B-00	WASHER, CTL	
355	3-669-317-00	SPRING, COMPRESSION	
356	A-6761-043-A	ACE ASSY (M-2)	
357	3-669-327-00	BELT, RUBBER	
358	3-669-465-00	WASHER (1.5), STOPPER	
359	3-669-328-00	PULLEY, GEAR	
360	3-669-332-00	GEAR (BA)	
361	X-3669-324-0	CHASSIS ASSY, MOTOR, L	
362	X-3669-321-0	GEAR (C) ASSY	
363	3-669-333-00	GEAR (BC)	
364	♠ :A-6737-090-A	ASSY, L MOTOR	
365	♠ :A-6728-243-A	LM-B BOARD, COMPLETE	
366	♠ :3-669-613-00	INSULATOR, L MOTOR	

(0) CHASSIS ASSEMBLY 2


A
B
C
D
1
2
3
4
402
PS2 x 5
401
403
P2 x 3
P2 x 4
405
404
W2, SMALL
PS2 x 6
SET SCREW
⊖2 x 6
406
407
409
PS2 x 10
BVTT2.6 x 6
410
409

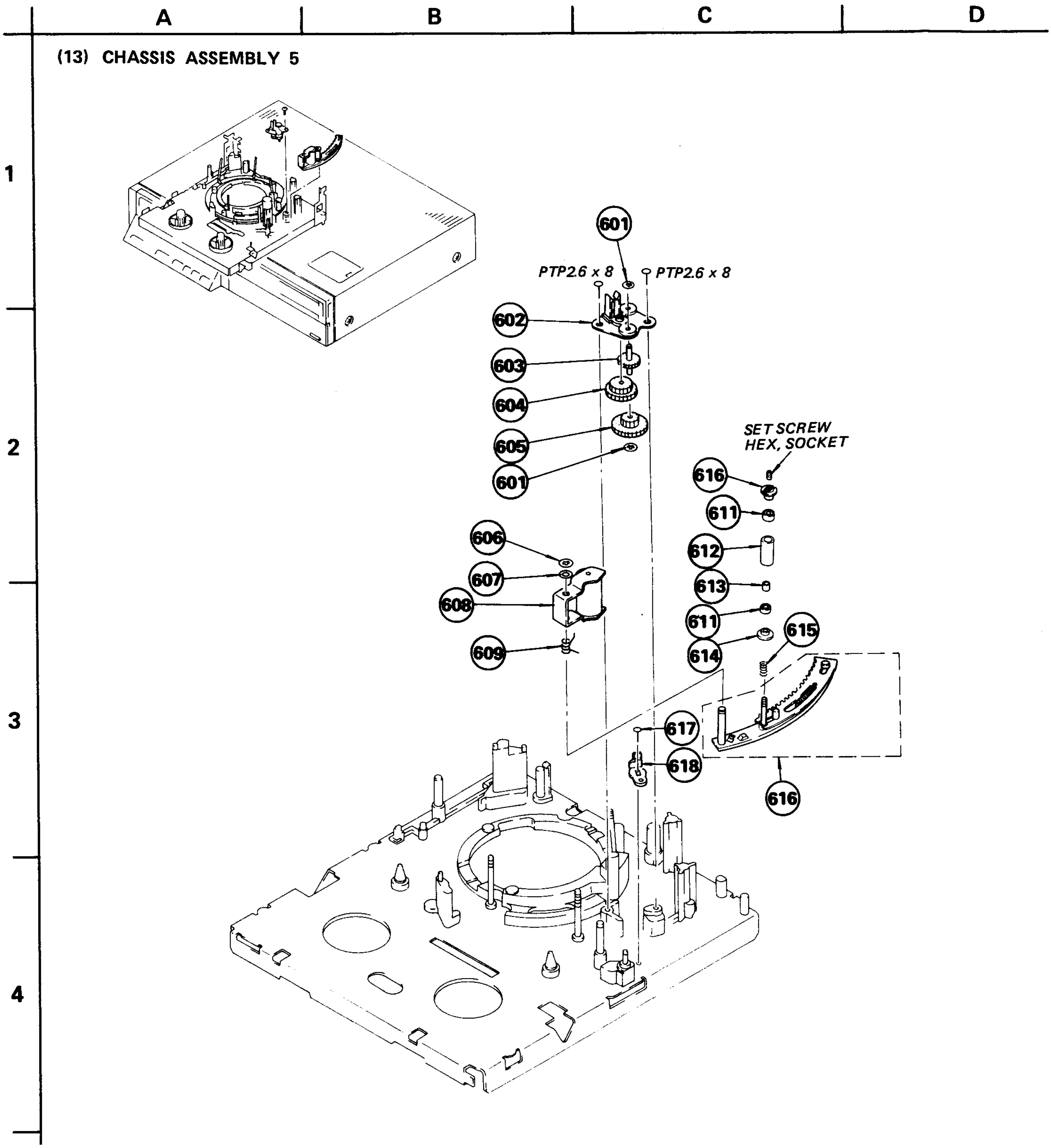
No.	Part No	Description	Remark
401	A-6742-037-A	TP ASSY	
402	3-669-465-00	WASHER (1.5), STOPPER	
403	1-235-054-21	COIL, SENSOR, S	
404	X-3669-351-0	ARM ASSY, LOCK	405
405	3-140-194-XX	SPRING, TENSION	
406	1-552-664-00	SWITCH, MICRO	
407	3-669-607-00	+PSW (SMALL ROUND) 2.6	
408	♦ :3-669-354-00	BRACKET, SWITCH, LE	
409	♦ :3-670-167-00	INSULATOR	
410	♦ :1-606-001-00	RL-7 BOARD	

(12) DRUM ASSEMBLY


A
B
C
D
1
2
3
4
565
566
P2 x 4
552
553
551
P3 x 8
554
555
P2 x 4
556
P3 x 5
557
P3 x 5
559
564
558
W4
N4
560
561
561
562
562
562
561
563
563
563

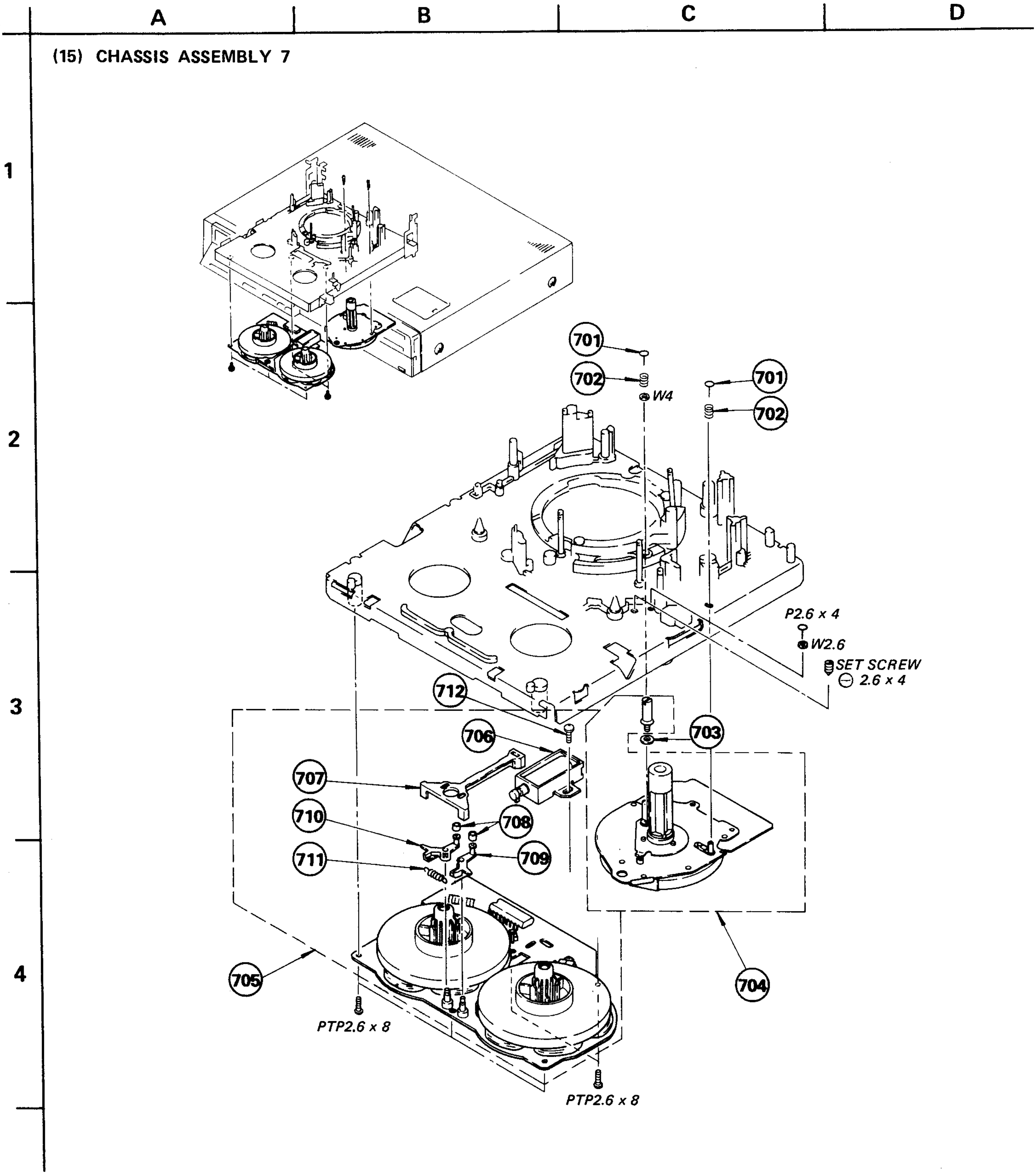
No.	Part No	Description	Remark	No.	Part No	Description	Remark
551	A-6050-116-A	DRUM ASS'Y DSH-16A-R		559	♦ :3-669-646-00	SPACER, DRUM	
552	X-3669-106-0	DAMPER ASS'Y		560	3-701-703-0D	KDDA ID MARK	
553	A-6760-064-A	DRUM ASS'Y, UPPER		561	3-669-600-11	WASHER, FLAT (3.5)	
554	A-6762-061-A	DISK ASS'Y		562	3-429-123-D0	SPRING	
555	A-6762-060-B	FLANGE ASS'Y LOWER DRUM		563	3-669-302-00	SCREW, FITTING	
556	X-3669-105-0	SPACER BLOCK ASS'Y		564	♦ :3-669-646-11	SPACER, DRUM	
557	X-2621-204-2	STATOR ASS'Y, DRUM		565	3-669-696-D0	SCREW, WEIGHT (M2.6X6)	
558	X-2621-202-0	ROTAR ASS'Y, DRUM		566	♦ :3-669-684-0D	WEIGHT	

(13) CHASSIS ASSEMBLY 5


A
B
C
D
1
2
3
4
601
PTP2.6 x 8
PTP2.6 x 8
602
603
604
605
601
SET SCREW
HEX, SOCKET
616
611
612
613
611
615
614
606
607
608
609
617
618
616

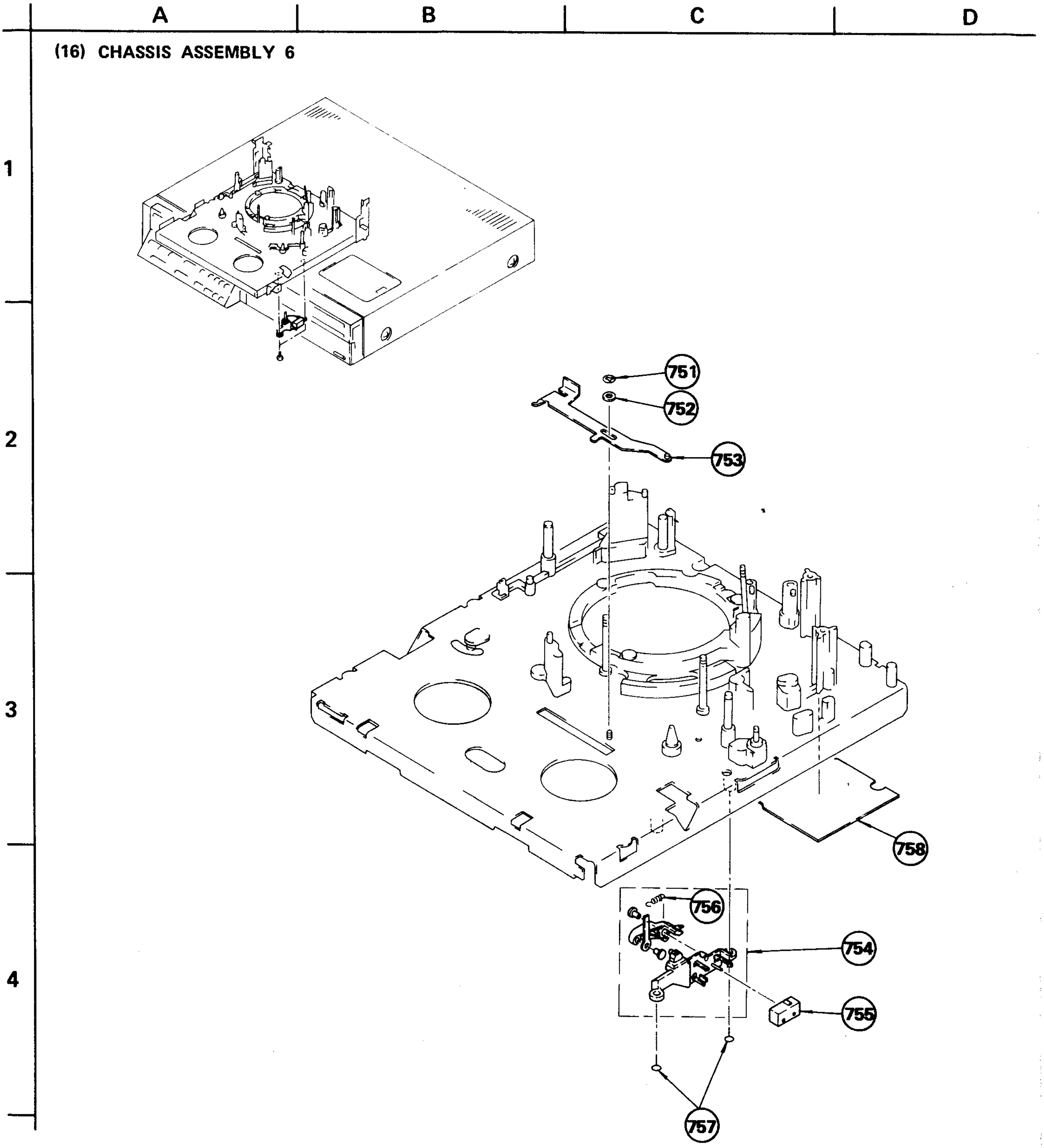
No.	Part No	Description	Remark
601	3-669-465-00	WASHER (1.5), STOPPER	
602	X-3669-326-0	CHASSIS ASSY, GEAR, DRIVE	
6D3	X-3669-305-0	GEAR (F) ASSY	
604	3-669-338-00	GEAR (E)	
605	3-669-337-00	GEAR (D)	
606	3-669-596-00	WASHER (2.3), STOPPER	
607	3-701-439-01	WASHER	
608	X-3669-307-0	ARM ASSY, PINCH ROLLER	
609	3-669-444-00	SPRING, TORSION	
610	3-669-431-00	FLANGE (UPPER), GUIDE	
611	3-669-443-00	BEARING, BALL (NO FLANGE)	
612	3-669-438-0D	ROLLER, GUIDE	
613	3-657-B41-31	SPACER (DIA. 2)	
614	3-669-432-00	FLANGE (LOWER), GUIDE	
615	3-669-452-D0	SPRING, COMPRESSION	
616 ♠	:X-3669-350-0	GEAR ASSY, SLIDER	
617	3-669-607-11	+PSW (SMALL ROUND) (2.6)	
61B ♠	:3-669-350-00	STOPPER, SLIDER	

(15) CHASSIS ASSEMBLY 7


A
B
C
D
1
2
3
4
701
702
W4
701
702
P2.6 x 4
W2.6
SET SCREW
⊖ 2.6 x 4
712
706
703
707
710
708
711
709
705
704
PTP2.6 x 8
PTP2.6 x 8

No.	Part No	Description	Remark
701	3-669-633-00	SCREW, + PW2	
702	3-669-602-00	SPRING, COMPRESSION	
703	3-669-697-00	SPACER, CAPSTAN	
704	8-838-022-11	MOTOR, DC (BHF-1900B)	
705	♦ :A-6737-093-A	BLOCK ASSY, L MOTOR	
706	1-454-281-00	SOLENOID, PLUNGER	
707	♦ :3-669-530-00	ARM, BRAKE	
708	3-669-305-00	BUSHING	
709	♦ :3-669-303-00	BRAKE, T	
710	♦ :3-669-304-00	BRAKE, S	
711	3-491-360-00	SPRING, TENSION	
712	3-669-663-00	+PSW 2.6	

(16) CHASSIS ASSEMBLY 6


A
B
C
D
1
2
3
4
751
752
753
758
756
754
755
757

No.	Part No	Description	Remark	No.	Part No	Description	Remark
751	3-669-595-00	WASHER (2), STOPPER		755	1-553-717-00	SWITCH, MICRO	
752	3-701-438-21	WASHER		756	● :3-669-411-00	SPRING, TENSION	
753	● :X-3670-021-0	PLATE ASSY, UNLOCK		757	3-669-480-11	+ PTPWH 2	
754	● :X-3669-323-0	MR ASSY		758	● :3-669-599-00	INSULATOR	

SECTION 6
ELECTRICAL PARTS LIST

Ref.No	Part No	Description			Remark
	♠:A-6711-293-A	VA-3 BOARD, COMPLETE *********************			
	♠:3-670-153-00	HOLDER, PCB			
	3-670-164-00	SPACER, JACK			
	♠:3-671-851-00	CASE (MAIN), SHIELO, VA-V			
	♠:3-671-853-00	LID, REAR, CASE, SHIELD, VA-V			
	♠:3-671-854-00	CASE (MAIN), SHIELD, VA-A			
	♠:3-671-856-00	LIO, REAR, CASE, SHIELO, VA-A			
	3-671-893-00	CLAMP (LOW TYPE)			
	3-701-444-11	WASHER, 6			
		CAPACITOR			
C001	1-123-838-00	ELECT	1000MF	20%	6.3V
C002	1-123-838-00	ELECT	1000MF	20%	6.3V
C003	1-161-013-00	CERAMIC	0.01MF	10%	25V
C004	1-102-950-00	CERAMIC	13PF	5%	50V
C008	1-102-971-00	CERAMIC	82PF	5%	50V
C009	1-123-381-00	ELECT	2.2MF	20%	50V
C010	1-102-972-00	CERAMIC	91PF	5%	50V
C011	1-123-381-00	ELECT	2.2MF	20%	50V
C012	1-101-884-00	CERAMIC	56PF	5%	50V
C013	1-123-381-00	ELECT	2.2MF	20%	50V
C014	1-161-013-00	CERAMIC	0.01MF	10%	25V
C015	1-161-013-00	CERAMIC	0.01MF	10%	25V
C016	1-161-013-00	CERAMIC	0.01MF	10%	25V
C017	1-123-381-00	ELECT	2.2MF	20%	50V
C018	1-123-356-00	ELECT	10MF	20%	16V
C019	1-161-013-00	CERAMIC	0.01MF	10%	25V
C020	1-161-021-00	CERAMIC	0.047MF	10%	25V
C021	1-123-318-00	ELECT	33MF	20%	16V
C022	1-102-963-00	CERAMIC	33PF	5%	50V
C023	1-101-880-00	CERAMIC	47PF	5%	50V
C025	1-101-361-00	CERAMIC	150PF	5%	50V
C026	1-123-356-00	ELECT	10MF	20%	16V
C027	1-101-884-00	CERAMIC	56PF	5%	50V
C028	1-102-971-00	CERAMIC	82PF	5%	50V
C029	1-102-966-00	CERAMIC	43PF	5%	50V
C030	1-102-947-00	CERAMIC	10PF	5%	50V
C031	1-161-021-00	CERAMIC	0.047MF	10%	25V
C032	1-102-820-00	CERAMIC	330PF	5%	50V
C033	1-102-118-00	CERAMIC	0.0012MF	10%	50V
C034	1-161-021-00	CERAMIC	0.047MF	10%	25V
C035	1-102-947-00	CERAMIC	10PF	5%	50V
C036	1-123-330-00	ELECT	22MF	20%	16V
C037	1-123-356-00	ELECT	10MF	20%	16V
C038	1-161-013-00	CERAMIC	0.01MF	10%	25V
C039	1-123-380-00	ELECT	1MF	20%	50V
C040	1-123-380-00	ELECT	1MF	20%	50V
C041	1-102-965-00	CERAMIC	39PF	5%	50V
C042	1-123-340-00	ELECT	4.7MF	20%	35V
C043	1-102-074-00	CERAMIC	0.001MF	10%	50V
C044	1-123-305-00	ELECT	33MF	20%	10V
C045	1-102-074-00	CERAMIC	0.001MF	10%	50V
C046	1-102-947-00	CERAMIC	10PF	5%	50V
C047	1-123-330-00	ELECT	22MF	20%	16V
C048	1-102-947-00	CERAMIC	10PF	5%	50V
C049	1-102-947-00	CERAMIC	10PF	5%	50V
C050	1-123-330-00	ELECT	22MF	20%	16V
C051	1-123-340-00	ELECT	4.7MF	20%	35V
C052	1-123-330-00	ELECT	22MF	20%	16V
C053	1-123-330-00	ELECT	22MF	20%	16V
C054	1-123-330-00	ELECT	22MF	20%	16V
C055	1-102-962-00	CERAMIC	30PF	5%	50V
C056	1-101-888-00	CERAMIC	68PF	5%	50V
C057	1-102-936-00	CERAMIC	3PF	0.25PF	50V
C058	1-161-013-00	CERAMIC	0.01MF	10%	25V
C059	1-123-381-00	ELECT	2.2MF	20%	50V
C060	1-123-356-00	ELECT	10MF	20%	16V
C061	1-123-305-00	ELECT	33MF	20%	10V
C062	1-123-356-00	ELECT	10MF	20%	16V
C063	1-123-305-00	ELECT	33MF	20%	10V
C064	1-123-356-00	ELECT	10MF	20%	16V
C065	1-123-305-00	ELECT	33MF	20%	10V
C066	1-101-888-00	CERAMIC	68PF	5%	50V
C067	1-102-964-00	CERAMIC	36PF	5%	50V
C068	1-102-953-00	CERAMIC	18PF	5%	50V
C069	1-161-013-00	CERAMIC	0.01MF	10%	25V
C070	1-102-963-00	CERAMIC	33PF	5%	50V
C071	1-102-816-00	CERAMIC	120PF	5%	50V
C072	1-101-884-00	CERAMIC	56PF	5%	50V
C073	1-102-973-00	CERAMIC	100PF	5%	50V
C074	1-123-356-00	ELECT	10MF	20%	16V
C075	1-123-356-00	ELECT	10MF	20%	16V
C076	1-101-888-00	CERAMIC	68PF	5%	50V
C078	1-161-013-00	CERAMIC	0.01MF	10%	25V
C079	1-161-013-00	CERAMIC	0.01MF	10%	25V
C080	1-161-013-00	CERAMIC	0.01MF	10%	25V
C081	1-123-330-00	ELECT	22MF	20%	16V
C082	1-101-059-00	CERAMIC	510PF	5%	50V
C083	1-123-356-00	ELECT	10MF	20%	16V
C084	1-123-356-00	ELECT	10MF	20%	16V
C086	1-102-074-00	CERAMIC	0.001MF	10%	50V
C089	1-123-333-00	ELECT	100MF	20%	16V
C090	1-123-356-00	ELECT	10MF	20%	16V
C091	1-123-307-00	ELECT	100MF	20%	10V
C092	1-123-330-00	ELECT	22MF	20%	16V
C093	1-123-607-00	ELECT	0.1MF	20%	50V
C094	1-123-332-00	ELECT	47MF	20%	16V
C095	1-123-610-00	ELECT	0.47MF	20%	50V
C096	1-161-021-00	CERAMIC	0.047MF	10%	25V
C097	1-123-318-00	ELECT	33MF	20%	16V
C098	1-130-495-00	MYLAR	0.1MF	5%	50V
C099	1-123-356-00	ELECT	10MF	20%	16V
C100	1-123-380-00	ELECT	1MF	20%	50V
C101	1-102-977-00	CERAMIC	200PF	5%	50V

NOTE:

The components identified by shading and mark ⚠ are critical for safety. Replace only with part number specified.

Les composants identifiés par une trame et une marque ⚠ sont critiques pour la sécurité. Ne les remplacer que par une pièce portant le numéro spécifié.

When indicating parts by reference number, please include the board name.

- =>: Due to standardization, interchangeable replacements may be substituted for parts specified in the diagrams.
- Items marked " ♠ " are not stocked since they are seldom required for routine service. Some delay should be anticipated when ordering these items.

- All variable and adjustable resistors have characteristic curve B, unless otherwise noted.

CAPACITORS
- MF : μF, PF : μμF

RESISTORS
- All resistors are in ohms
- F : nonflammable

COILS
- MMH : mH, UH : μH

VA-3 BOARD

Ref.No	Part No	Description			Remark
C102	1-102-820-00	CERAMIC	330PF	5%	50V
C103	1-123-356-00	ELECT	10MF	20%	16V
C104	1-108-591-00	MYLAR	0.033MF	5%	50V
C105	1-101-059-00	CERAMIC	510PF	5%	50V
C106	1-161-021-00	CERAMIC	0.047MF	10%	25V
C107	1-108-555-00	MYLAR	0.001MF	5%	50V
C108	1-102-820-00	CERAMIC	330PF	5%	50V
C109	1-108-555-00	MYLAR	0.001MF	5%	50V
C110	1-123-356-00	ELECT	10MF	20%	16V
C111	1-161-021-00	CERAMIC	0.047MF	10%	25V
C112	1-123-306-00	ELECT	47MF	20%	10V
C113	1-123-305-00	ELECT	33MF	20%	10V
C114	1-101-888-00	CERAMIC	68PF	5%	50V
C115	1-102-963-00	CERAMIC	33PF	5%	50V
C116	1-101-059-00	CERAMIC	510PF	5%	50V
C120	1-102-116-00	CERAMIC	680PF	10%	50V
C121	1-102-116-00	CERAMIC	680PF	10%	50V
C122	1-123-380-00	ELECT	1MF	20%	50V
C123	1-123-379-00	ELECT	0.47MF	20%	50V
C124	1-123-380-00	ELECT	1MF	20%	50V
C125	1-123-356-00	ELECT	10MF	20%	16V
C126	1-123-356-00	ELECT	10MF	20%	16V
C127	1-102-951-00	CERAMIC	15PF	5%	50V
C128	1-161-013-00	CERAMIC	0.01MF	10%	25V
C129	1-101-888-00	CERAMIC	68PF	5%	50V
C130	1-101-888-00	CERAMIC	68PF	5%	50V
C131	1-161-013-00	CERAMIC	0.01MF	10%	25V
C132	1-102-978-00	CERAMIC	220PF	5%	50V
C133	1-123-379-00	ELECT	0.47MF	20%	50V
C134	1-161-013-00	CERAMIC	0.01MF	10%	25V
C135	1-123-356-00	ELECT	10MF	20%	16V
C136	1-123-382-00	ELECT	3.3MF	20%	50V
C137	1-102-074-00	CERAMIC	0.001MF	10%	50V
C138	1-161-013-00	CERAMIC	0.01MF	10%	25V
C139	1-161-013-00	CERAMIC	0.01MF	10%	25V
C140	1-161-013-00	CERAMIC	0.01MF	10%	25V
C141	1-102-074-00	CERAMIC	0.001MF	10%	50V
C142	1-161-013-00	CERAMIC	0.01MF	10%	25V
C143	1-123-356-00	ELECT	10MF	20%	16V
C144	1-102-816-00	CERAMIC	120PF	5%	50V
C145	1-161-013-00	CERAMIC	0.01MF	10%	25V
C146	1-123-380-00	ELECT	1MF	20%	50V
C149	1-161-013-00	CERAMIC	0.01MF	10%	25V
C150	1-123-340-00	ELECT	4.7MF	20%	35V
C151	1-131-345-00	ELECT(SOLID)	0.47MF	10%	25V
C152	1-161-013-00	CERAMIC	0.01MF	10%	25V
C153	1-161-013-00	CERAMIC	0.01MF	10%	25V
C155	1-161-013-00	CERAMIC	0.01MF	10%	25V
C156	1-161-013-00	CERAMIC	0.01MF	10%	25V
C157	1-123-039-00	ELECT	22MF	20%	16V
C158	1-131-347-00	ELECT(SOLID)	1MF	20%	16V
C159	1-123-356-00	ELECT	10MF	20%	16V
C160	1-123-356-00	ELECT	10MF	20%	16V
C161	1-123-356-00	ELECT	10MF	20%	16V
C162	1-123-356-00	ELECT	10MF	20%	16V
C163	1-161-013-00	CERAMIC	0.01MF	10%	25V
C164	1-123-356-00	ELECT	10MF	20%	16V
C165	1-123-305-00	ELECT	33MF	20%	10V
C166	1-130-495-00	MYLAR	0.1MF	5%	50V
C167	1-123-381-00	ELECT	2.2MF	20%	50V
C168	1-123-382-00	ELECT	3.3MF	20%	50V
C169	1-123-382-00	ELECT	3.3MF	20%	50V
C170	1-123-330-00	ELECT	22MF	20%	16V
C171	1-102-948-00	CERAMIC	11PF	5%	50V
C172	1-123-356-00	ELECT	10MF	20%	16V
C174	1-102-074-00	CERAMIC	0.001MF	10%	50V
C176	1-102-947-00	CERAMIC	10PF	5%	50V
C178	1-108-583-00	MYLAR	0.015MF	5%	50V
C179	1-102-074-00	CERAMIC	0.001MF	10%	50V
C180	1-102-074-00	CERAMIC	0.001MF	10%	50V
C181	1-102-074-00	CERAMIC	0.001MF	10%	50V
C182	1-102-074-00	CERAMIC	0.001MF	10%	50V
C183	1-161-021-00	CERAMIC	0.047MF	10%	25V
C184	1-161-013-00	CERAMIC	0.01MF	10%	25V
C185	1-161-013-00	CERAMIC	0.01MF	10%	25V
C186	1-102-951-00	CERAMIC	15PF	5%	50V
C187	1-102-959-00	CERAMIC	22PF	5%	50V
C188	1-123-382-00	ELECT	3.3MF	20%	50V
C189	1-123-039-00	ELECT	22MF	20%	16V
C190	1-161-013-00	CERAMIC	0.01MF	10%	25V
C191	1-161-039-00	CERAMIC	0.001MF	10%	25V
C192	1-161-013-00	CERAMIC	0.01MF	10%	25V
C193	1-161-013-00	CERAMIC	0.01MF	10%	25V
C194	1-161-021-00	CERAMIC	0.047MF	10%	25V
C195	1-123-380-00	ELECT	1MF	20%	50V
C196	1-102-962-00	CERAMIC	30PF	5%	50V
C197	1-161-013-00	CERAMIC	0.01MF	10%	25V
C198	1-123-380-00	ELECT	1MF	20%	50V
C199	1-102-973-00	CERAMIC	100PF	5%	50V
C200	1-161-021-00	CERAMIC	0.047MF	10%	25V
C201	1-102-973-00	CERAMIC	100PF	5%	50V
C203	1-101-361-00	CERAMIC	150PF	5%	50V
C204	1-161-013-00	CERAMIC	0.01MF	10%	25V
C206	1-123-380-00	ELECT	1MF	20%	50V
C207	1-123-380-00	ELECT	1MF	20%	50V
C208	1-161-021-00	CERAMIC	0.047MF	10%	25V
C209	1-161-021-00	CERAMIC	0.047MF	10%	25V
C210	1-102-958-00	CERAMIC	20PF	5%	50V
C211	1-161-013-00	CERAMIC	0.01MF	10%	25V
C212	1-161-013-00	CERAMIC	0.01MF	10%	25V
C215	1-161-013-00	CERAMIC	0.01MF	10%	25V
C216	1-102-973-00	CERAMIC	100PF	5%	50V
C217	1-161-021-00	CERAMIC	0.047MF	10%	25V
C218	1-123-381-00	ELECT	2.2MF	20%	50V
C220	1-101-888-00	CERAMIC	68PF	5%	50V
C222	1-161-021-00	CERAMIC	0.047MF	10%	25V

NOTE:

The components identified by shading and mark ⚠ are critical for safety. Replace only with part number specified.

Les composants identifiés par une trame et une marque ⚠ sont critiques pour la sécurité. Ne les remplacer que par une pièce portant le numéro spécifié.

When indicating parts by reference number, please include the board name.

- =>: Due to standardization, interchangeable replacements may be substituted for parts specified in the diagrams.
- Items marked " ♦ " are not stocked since they are seldom required for routine service. Some delay should be anticipated when ordering these items.
- All variable and adjustable resistors have characteristic curve B, unless otherwise noted.

CAPACITORS
- MF : μF, PF : μμF

RESISTORS
- All resistors are in ohms
- F : nonflammable

COILS
- MMH : mH, UH : μH

VA-3 BOARD

Ref.No	Part No	Description			Remark
C223	1-161-063-00	CERAMIC	0.1MF	20%	25V
C224	1-102-958-00	CERAMIC	20PF	5%	50V
C226	1-161-021-00	CERAMIC	0.047MF	10%	25V
C228	1-161-021-00	CERAMIC	0.047MF	10%	25V
C230	1-123-330-00	ELECT	22MF	20%	16V
C232	1-161-013-00	CERAMIC	0.01MF	10%	25V
C301	1-102-516-00	CERAMIC	27PF	5%	50V
C302	1-161-021-00	CERAMIC	0.047MF	10%	25V
C303	1-161-021-00	CERAMIC	0.047MF	10%	25V
C304	1-102-074-00	CERAMIC	0.001MF	10%	50V
C305	1-102-074-00	CERAMIC	0.001MF	10%	50V
C306	1-161-005-00	CERAMIC	0.0022MF	10%	25V
C307	1-161-021-00	CERAMIC	0.047MF	10%	25V
C308	1-161-013-00	CERAMIC	0.01MF	10%	25V
C310	1-102-959-00	CERAMIC	22PF	5%	50V
C311	1-161-013-00	CERAMIC	0.01MF	10%	25V
C312	1-161-013-00	CERAMIC	0.01MF	10%	25V
C313	1-161-013-00	CERAMIC	0.01MF	10%	25V
C314	1-102-963-00	CERAMIC	33PF	5%	50V
C315	1-161-021-00	CERAMIC	0.047MF	10%	25V
C317	1-102-125-00	CERAMIC	0.0047MF	10%	50V
C318	1-123-340-00	ELECT	4.7MF	20%	35V
C319	1-161-013-00	CERAMIC	0.01MF	10%	25V
C320	1-102-958-00	CERAMIC	20PF	5%	50V
C321	1-161-021-00	CERAMIC	0.047MF	10%	25V
C323	1-108-573-00	MYLAR	0.0056MF	5%	50V
C325	1-123-332-00	ELECT	47MF	20%	16V
C328	1-161-021-00	CERAMIC	0.047MF	10%	25V
C329	1-161-021-00	CERAMIC	0.047MF	10%	25V
C332	1-102-953-00	CERAMIC	18PF	5%	50V
C333	1-102-961-00	CERAMIC	27PF	5%	50V
C500	1-108-555-00	MYLAR	0.001MF	5%	50V
C501	1-108-561-00	MYLAR	0.0018MF	5%	50V
C502	1-102-116-00	CERAMIC	680PF	10%	50V
C503	1-123-294-00	ELECT	47MF	20%	6.3V
C504	1-123-306-00	ELECT	47MF	20%	10V
C505	1-123-356-00	ELECT	10MF	20%	16V
C506	1-108-587-00	MYLAR	0.022MF	5%	50V
C507	1-102-963-00	CERAMIC	33PF	5%	50V
C508	1-123-356-00	ELECT	10MF	20%	16V
C509	1-108-593-00	MYLAR	0.039MF	5%	50V
C510	1-108-583-00	MYLAR	0.015MF	5%	50V
C511	1-108-591-00	MYLAR	0.033MF	5%	50V
C512	1-123-330-00	ELECT	22MF	20%	16V
C513	1-102-980-00	CERAMIC	270PF	5%	50V
C514	1-123-356-00	ELECT	10MF	20%	16V
C515	1-123-379-00	ELECT	0.47MF	20%	50V
C516	1-129-710-00	FILM	0.0047MF	10%	630V
C517	1-108-571-00	MYLAR	0.0047MF	5%	50V
C518	1-108-567-00	MYLAR	0.0033MF	5%	50V
C519	1-123-306-00	ELECT	47MF	20%	10V
C520	1-123-356-00	ELECT	10MF	20%	16V
C521	1-123-381-00	ELECT	2.2MF	20%	50V

Ref.No	Part No	Description			Remark
C522	1-123-381-00	ELECT	2.2MF	20%	50V
C523	1-123-381-00	ELECT	2.2MF	20%	50V
C524	1-123-306-00	ELECT	47MF	20%	10V
C525	1-123-356-00	ELECT	10MF	20%	16V
C526	1-108-555-00	MYLAR	0.001MF	5%	50V
C527	1-102-824-00	CERAMIC	430PF	5%	50V
C528	1-123-356-00	ELECT	10MF	20%	16V
C529	1-123-356-00	ELECT	10MF	20%	16V
C530	1-123-307-00	ELECT	100MF	20%	10V
C531	1-123-328-00	ELECT	4.7MF	20%	25V
C532	1-123-328-00	ELECT	4.7MF	20%	25V
C534	1-123-380-00	ELECT	1MF	20%	50V
C537	1-123-356-00	ELECT	10MF	20%	16V
C541	1-108-583-00	MYLAR	0.015MF	5%	50V
C542	1-108-579-00	MYLAR	0.01MF	5%	50V
C543	1-108-599-00	MYLAR	0.068MF	5%	50V
C544	1-102-961-00	CERAMIC	27PF	5%	50V
C545	1-108-555-00	MYLAR	0.001MF	5%	50V
C546	1-123-356-00	ELECT	10MF	20%	16V
C547	1-123-332-00	ELECT	47MF	20%	16V
C549	1-123-356-00	ELECT	10MF	20%	16V
C550	1-123-356-00	ELECT	10MF	20%	16V
C551	1-102-973-00	CERAMIC	100PF	5%	50V
C552	1-123-380-00	ELECT	1MF	20%	50V
C553	1-102-973-00	CERAMIC	100PF	5%	50V
C553	1-108-571-00	MYLAR	0.0047MF	5%	50V
C554	1-102-118-00	CERAMIC	0.0012MF	10%	50V
C555	1-123-356-00	ELECT	10MF	20%	16V
C556	1-123-356-00	ELECT	10MF	20%	16V
C557	1-123-356-00	ELECT	10MF	20%	16V
C558	1-123-356-00	ELECT	10MF	20%	16V
C559	1-123-380-00	ELECT	1MF	20%	50V
C560	1-102-961-00	CERAMIC	27PF	5%	50V
C561	1-123-356-00	ELECT	10MF	20%	16V
C562	1-123-332-00	ELECT	47MF	20%	16V
C563	1-161-021-00	CERAMIC	0.047MF	10%	25V
C564	1-161-021-00	CERAMIC	0.047MF	10%	25V
C565	1-161-021-00	CERAMIC	0.047MF	10%	25V
C566	1-161-021-00	CERAMIC	0.047MF	10%	25V
C567	1-123-356-00	ELECT	10MF	20%	16V
C568	1-161-021-00	CERAMIC	0.047MF	10%	25V
C570	1-123-356-00	ELECT	10MF	20%	16V
C571	1-123-356-00	ELECT	10MF	20%	16V
C583	1-161-021-00	CERAMIC	0.047MF	10%	25V
C591	1-123-294-00	ELECT	47MF	20%	6.3V
C592	1-123-318-00	ELECT	33MF	20%	16V

FILTER

CF001	1-527-831-00	FILTER, CERAMIC
CF002	1-527-823-00	FILTER, CERAMIC
CF003	1-527-823-00	FILTER, CERAMIC
CF004	1-231-302-00	CERAMIC FILTER (4.27MHZ)

NOTE:

The components identified by shading and mark ⚠ are critical for safety.
Replace only with part number specified.

Les composants identifiés par une trame et une marque ⚠ sont critiques pour la sécurité.
Ne les remplacer que par une pièce portant le numéro spécifié.

When indicating parts by reference number, please include the board name.

- =>: Due to standardization, interchangeable replacements may be substituted for parts specified in the diagrams.
- Items marked " ● " are not stocked since they are seldom required for routine service. Some delay should be anticipated when ordering these items.
- All variable and adjustable resistors have characteristic curve B, unless otherwise noted.

CAPACITORS
- MF : μF, PF : μμF

RESISTORS
- All resistors are in ohms
- F : nonflammable

COILS
- MMH : mH, UH : μH

VA-3 BOARD

Ref.No	Part No	Description	Remark
		CONNECTOR	
CN001♠:	1-560-471-00	PIN, CONNECTOR 10P	
CN002♠:	1-560-461-00	PIN, CONNECTOR 5P	
CN003♠:	1-560-470-00	PIN, CONNECTOR 8P	
CN004♠:	1-560-471-00	PIN, CONNECTOR 10P	
CN005♠:	1-560-469-00	PIN, CONNECTOR 6P	
CN006♠:	1-560-467-00	PIN, CONNECTOR 4P	
CN007	1-561-690-00	CONNECTOR, CAMERA 14P	
CN009♠:	1-560-468-00	PIN, CONNECTOR 5P	
CN011♠:	1-560-470-00	PIN, CONNECTOR 8P	
CN012	1-561-703-00	CONNECTOR, DIN 8P	
CN500♠:	1-560-469-00	PIN, CONNECTOR 6P	
CN505♠:	1-560-466-00	PIN, CONNECTOR 3P	
CN506♠:	1-560-469-00	PIN, CONNECTOR 6P	
CN507♠:	1-560-468-00	PIN, CONNECTOR 5P	
CN509♠:	1-560-469-00	PIN, CONNECTOR 6P	
CN510	1-507-251-XX	JACK	
CN511	1-507-251-XX	JACK	
		TRIMER	
CT500	1-141-215-00	CAP, TRIMER 100PF	
		DIODE	
D001	8-719-911-19	DIODE 1SS119	
D002	8-719-911-19	DIODE 1SS119	
D003	8-719-911-19	DIODE 1SS119	
D004	8-719-911-19	DIODE 1SS119	
D005	8-719-911-19	DIODE 1SS119	
D006	8-719-911-19	DIODE 1SS119	
D007	8-719-911-19	DIODE 1SS119	
D008	8-719-113-07	DIODE RD13E-B	
D009	8-719-113-07	DIODE RD13E-B	
D010	8-719-113-07	DIODE RD13E-B	
D011	8-719-118-07	DIODE RD18E-B	
D012	8-719-118-07	DIODE RD18E-B	
D013	8-719-113-07	DIODE RD13E-B	
D014	8-719-113-07	DIODE RD13E-B	
D015	8-719-113-07	DIODE RD13E-B	
D016	8-719-113-07	DIODE RD13E-B	
D017	8-719-113-07	DIODE RD13E-B	
D018	8-719-911-19	DIODE 1SS119	
D019	8-719-191-07	DIODE RD9.1E-B	
D020	8-719-191-07	DIODE RD9.1E-B	
D021	8-719-911-19	DIODE 1SS119	
D022	8-719-911-19	DIODE 1SS119	
D023	8-719-113-07	DIODE RD13E-B	
D024	8-719-911-19	DIODE 1SS119	
D025	8-719-911-19	DIODE 1SS119	
D500	8-719-911-19	DIODE 1SS119	
D501	8-719-911-19	DIODE 1SS119	
D502	8-719-911-19	DIODE 1SS119	
D503	8-719-911-19	DIODE 1SS119	
D504	8-719-911-19	DIODE 1SS119	
D505	8-719-911-19	DIODE 1SS119	
D506	8-719-911-19	DIODE 1SS119	
D507	8-719-911-19	DIODE 1SS119	
D508	8-719-911-19	DIODE 1SS119	
D510	8-719-911-19	DIODE 1SS119	
D513	8-719-911-19	DIODE 1SS119	
D514	8-719-911-19	DIODE 1SS119	
D515	=>8-719-911-19	DIODE 1SS119	
D516	=>8-719-911-19	DIODE 1SS119	
D517	=>8-719-911-19	DIODE 1SS119	
D518	8-719-911-19	DIODE 1SS119	
D519	8-719-911-19	DIODE 1SS119	
D540	8-719-911-19	DIODE 1SS119	
		DELAY LINE	
DL001	1-415-243-00	DELAY LINE (1H)	
DL002	1-415-065-00	DELAY LINE (1H)	
DL003	1-415-244-21	DELAY LINE (1/2H)	
DL004	1-415-245-00	DELAY LINE (1/4H)	
		IC	
IC001	8-743-945-10	IC BX-3945-1	
IC002	8-743-946-10	IC BX-3946-1	
IC003	8-759-608-64	IC CX-864	
IC004	8-759-608-65	IC CX-865	
IC005	8-758-660-00	IC CX-866	
IC006	8-759-208-67	IC CX-867	
IC007	8-759-908-68	IC CX-868	
IC008	8-758-690-00	IC CX-869	
IC010	8-759-919-05	IC CX-7905A	
IC011	8-743-955-00	IC BX-3955	
IC012	8-743-956-10	IC BX-3956-1	
IC014	8-743-958-10	IC BX-3958-1	
IC015	8-743-959-10	IC BX-3959-1	
IC016	8-759-208-92	IC CX-892	
IC017	8-759-208-94	IC CX-894	
IC018	8-752-000-80	IC CX20008	
IC091	=>8-759-600-08	IC CX-870A	
IC092	8-759-608-82	IC CX-882	
IC500	8-759-240-66	IC TC4066BP	
		COIL	
L001	1-408-620-11	MICRO INDUCTOR 270UH	
L002	1-408-620-11	MICRO INDUCTOR 270UH	
L003	1-408-408-00	MICRO INDUCTOR 8.2UH	
L004	1-408-408-00	MICRO INDUCTOR 8.2UH	
L005	1-408-409-00	MICRO INDUCTOR 10UH	
L006	1-408-427-00	MICRO INDUCTOR 330UH	
L007	1-408-418-00	MICRO INDUCTOR 56UH	
L008	1-408-417-00	MICRO INDUCTOR 47UH	
L009	1-408-414-00	MICRO INDUCTOR 27UH	
L010	1-408-397-00	MICRO INDUCTOR 1UH	

NOTE:

The components identified by shading and mark ⚠ are critical for safety. Replace only with part number specified.

Les composants identifiés par une trame et une marque ⚠ sont critiques pour la sécurité. Ne les remplacer que par une pièce portant le numéro spécifié.

When indicating parts by reference number, please include the board name.

- =>: Due to standardization, interchangeable replacements may be substituted for parts specified in the diagrams.
- Items marked " ♠ " are not stocked since they are seldom required for routine service. Some delay should be anticipated when ordering these items.

- All variable and adjustable resistors have characteristic curve B, unless otherwise noted.

CAPACITORS
- MF : μF, PF : μμF

RESISTORS
- All resistors are in ohms
- F : nonflammable

COILS
- MMH : mH, UH : μH

VA-3 BOARD

Ref.No	Part No	Description	Remark
L011	1-408-397-00	MICRO INDUCTOR 1UH	
L012	1-408-423-00	MICRO INDUCTOR 150UH	
L013	1-408-419-00	MICRO INDUCTOR 68UH	
L014	1-408-418-00	MICRO INDUCTOR 56UH	
L015	1-408-414-00	MICRO INDUCTOR 27UH	
L016	1-408-414-00	MICRO INDUCTOR 27UH	
L017	1-408-402-00	MICRO INDUCTOR 2.7UH	
L019	1-408-401-00	MICRO INDUCTOR 2.2UH	
L021	1-408-422-00	MICRO INDUCTOR 120UH	
L022	1-408-427-00	MICRO INDUCTOR 330UH	
L023	1-408-423-00	MICRO INDUCTOR 150UH	
L024	1-407-502-31	MICRO INDUCTOR 6.8MMH	
L026	1-408-425-00	MICRO INDUCTOR 220UH	
L027	1-408-417-00	MICRO INDUCTOR 47UH	
L029	1-408-421-00	MICRO INDUCTOR 100UH	
L030	1-408-425-00	MICRO INDUCTOR 220UH	
L031	1-408-409-00	MICRO INDUCTOR 10UH	
L033	1-421-381-00	COIL, FERRITE CHOKE	
L034	1-408-414-00	MICRO INDUCTOR 27UH	
L036	1-408-401-00	MICRO INDUCTOR 2.2UH	
L037	1-408-402-00	MICRO INDUCTOR 2.7UH	
L038	1-407-188-XX	MICRO INDUCTOR 6.8UH	
L301	1-408-411-00	MICRO INDUCTOR 15UH	
L500	1-408-429-00	MICRO INDUCTOR 470UH	
L502	1-459-351-00	COIL (WITH CORE)	

VARIABLE COIL

Ref.No	Part No	Description	Remark
LV001	1-408-512-00	COIL (VARIABLE)	
LV500	1-408-524-00	INDUCTOR, ADJ 1.34MMH	
LV501	1-408-523-00	COIL, VARIABLE 22UH	

TRANSISTOR

Ref.No	Part No	Description	Remark
Q001	8-729-178-54	TRANSISTOR 2SC2785	
Q002	8-729-178-54	TRANSISTOR 2SC2785	
Q003	8-729-178-54	TRANSISTOR 2SC2785	
Q004	8-729-178-54	TRANSISTOR 2SC2785	
Q005	8-729-178-54	TRANSISTOR 2SC2785	
Q006	8-729-178-54	TRANSISTOR 2SC2785	
Q007	8-729-178-54	TRANSISTOR 2SC2785	
Q008	8-729-178-54	TRANSISTOR 2SC2785	
Q009	8-729-178-54	TRANSISTOR 2SC2785	
Q010	8-729-178-54	TRANSISTOR 2SC2785	
Q011	8-729-113-32	TRANSISTOR 2SB733	
Q012	8-729-178-54	TRANSISTOR 2SC2785	
Q013	8-729-117-54	TRANSISTOR 2SA1175	
Q014	8-729-117-54	TRANSISTOR 2SA1175	
Q015	8-729-178-54	TRANSISTOR 2SC2785	
Q016	8-729-178-54	TRANSISTOR 2SC2785	
Q017	8-729-178-54	TRANSISTOR 2SC2785	
Q018	8-729-178-54	TRANSISTOR 2SC2785	
Q019	8-729-178-54	TRANSISTOR 2SC2785	
Q020	8-729-178-54	TRANSISTOR 2SC2785	
Q021	8-729-178-54	TRANSISTOR 2SC2785	
Q022	8-729-178-54	TRANSISTOR 2SC2785	
Q023	8-729-178-54	TRANSISTOR 2SC2785	
Q024	8-729-178-54	TRANSISTOR 2SC2785	
Q025	8-729-178-54	TRANSISTOR 2SC2785	
Q026	8-729-178-54	TRANSISTOR 2SC2785	
Q027	8-729-117-54	TRANSISTOR 2SA1175	
Q500	8-729-178-54	TRANSISTOR 2SC2785	
Q501	8-729-178-54	TRANSISTOR 2SC2785	
Q502	8-729-908-62	TRANSISTOR 2SD786	
Q503	=>8-729-612-77	TRANSISTOR 2SA1027R	
Q504	8-729-178-54	TRANSISTOR 2SC2785	
Q505	8-729-178-54	TRANSISTOR 2SC2785	
Q506	8-729-178-54	TRANSISTOR 2SC2785	
Q507	8-729-178-54	TRANSISTOR 2SC2785	
Q509	8-729-178-54	TRANSISTOR 2SC2785	
Q510	8-729-967-32	TRANSISTOR 2SC2673	
Q512	8-729-178-54	TRANSISTOR 2SC2785	
Q513	8-729-178-54	TRANSISTOR 2SC2785	
Q514	=>8-769-200-30	TRANSISTOR 2SK107-3	
Q515	8-729-334-58	TRANSISTOR 2SC1345	
Q516	8-729-178-54	TRANSISTOR 2SC2785	
Q517	8-729-178-54	TRANSISTOR 2SC2785	
Q518	8-729-178-54	TRANSISTOR 2SC2785	
Q519	8-729-178-54	TRANSISTOR 2SC2785	
Q520	8-729-178-54	TRANSISTOR 2SC2785	
Q521	=>8-769-200-30	TRANSISTOR 2SK107-3	
Q522	8-729-178-54	TRANSISTOR 2SC2785	
Q523	8-729-178-54	TRANSISTOR 2SC2785	
Q524	8-729-178-54	TRANSISTOR 2SC2785	
Q525	8-729-178-54	TRANSISTOR 2SC2785	
Q526	8-729-178-54	TRANSISTOR 2SC2785	
Q529	8-729-178-54	TRANSISTOR 2SC2785	
Q530	8-729-178-54	TRANSISTOR 2SC2785	
Q531	8-729-178-54	TRANSISTOR 2SC2785	
Q532	8-729-178-54	TRANSISTOR 2SC2785	
Q533	8-729-178-54	TRANSISTOR 2SC2785	
Q538	8-729-178-54	TRANSISTOR 2SC2785	
Q539	8-729-178-54	TRANSISTOR 2SC2785	
Q540	8-729-178-54	TRANSISTOR 2SC2785	
Q541	8-729-178-54	TRANSISTOR 2SC2785	
Q542	8-729-988-12	TRANSISTOR 2SA881	
Q543	8-729-178-54	TRANSISTOR 2SC2785	
Q544	8-729-967-32	TRANSISTOR 2SC2673	
Q545	8-729-178-54	TRANSISTOR 2SC2785	
Q546	8-729-178-54	TRANSISTOR 2SC2785	
Q547	8-729-178-54	TRANSISTOR 2SC2785	

RESISTOR

Ref.No	Part No	Description			Remark
R001	1-246-843-00	CARBON	910	1/8W	
R002	1-246-848-00	CARBON	2.4K	1/8W	
R003	1-246-787-00	CARBON	2.2K	1/8W	
R004	1-246-843-00	CARBON	910	1/8W	
R006	1-246-780-00	CARBON	560	1/8W	

NOTE:

The components identified by shading and mark ⚠ are critical for safety.
Replace only with part number specified.

Les composants identifiés par une trame et une marque ⚠ sont critiques pour la sécurité.
Ne les remplacer que par une pièce portant le numéro spécifié.

When indicating parts by reference number, please include the board name.

- =>: Due to standardization, interchangeable replacements may be substituted for parts specified in the diagrams.
- Items marked " ● " are not stocked since they are seldom required for routine service. Some delay should be anticipated when ordering these items.

- All variable and adjustable resistors have characteristic curve B, unless otherwise noted.

CAPACITORS
- MF : μF, PF : μμF

RESISTORS
- All resistors are in ohms
- F : nonflammable

COILS
- MMH : mH, UH : μH

VA-3 BOARD

Ref.No	Part No	Description			Remark
R007	1-246-807-00	CARBON	100K	1/8W	
R008	1-246-801-00	CARBON	33K	1/8W	
R009	1-246-843-00	CARBON	910	1/8W	
R010	1-246-851-00	CARBON	4.3K	1/8W	
R011	1-246-857-00	CARBON	13K	1/8W	
R012	1-246-808-00	CARBON	120K	1/8W	
R013	1-246-799-00	CARBON	22K	1/8W	
R014	1-246-803-00	CARBON	47K	1/8W	
R015	1-246-795-00	CARBON	10K	1/8W	
R017	1-246-783-00	CARBON	1K	1/8W	
R018	1-246-792-00	CARBON	5.6K	1/8W	
R019	1-246-803-00	CARBON	47K	1/8W	
R020	1-246-809-00	CARBON	150K	1/8W	
R021	1-246-801-00	CARBON	33K	1/8W	
R022	1-246-802-00	CARBON	39K	1/8W	
R023	1-246-786-00	CARBON	1.8K	1/8W	
R024	1-246-802-00	CARBON	39K	1/8W	
R025	1-246-783-00	CARBON	1K	1/8W	
R026	1-246-851-00	CARBON	4.3K	1/8W	
R027	1-246-777-00	CARBON	330	1/8W	
R028	1-246-834-00	CARBON	160	1/8W	
R029	1-246-770-00	CARBON	82	1/8W	
R030	1-246-770-00	CARBON	82	1/8W	
R031	1-246-840-00	CARBON	510	1/8W	
R032	1-246-791-00	CARBON	4.7K	1/8W	
R033	1-246-834-00	CARBON	160	1/8W	
R034	1-246-791-00	CARBON	4.7K	1/8W	
R035	1-246-778-00	CARBON	390	1/8W	
R036	1-246-791-00	CARBON	4.7K	1/8W	
R037	1-246-783-00	CARBON	1K	1/8W	
R038	1-246-803-00	CARBON	47K	1/8W	
R039	1-246-861-00	CARBON	30K	1/8W	
R040	1-246-783-00	CARBON	1K	1/8W	
R041	1-246-844-00	CARBON	1.1K	1/8W	
R042	1-246-844-00	CARBON	1.1K	1/8W	
R043	1-246-792-00	CARBON	5.6K	1/8W	
R044	1-246-783-00	CARBON	1K	1/8W	
R045	1-246-801-00	CARBON	33K	1/8W	
R046	1-246-787-00	CARBON	2.2K	1/8W	
R047	1-246-802-00	CARBON	39K	1/8W	
R048	1-246-799-00	CARBON	22K	1/8W	
R049	1-246-796-00	CARBON	12K	1/8W	
R050	1-246-791-00	CARBON	4.7K	1/8W	
R051	1-246-779-00	CARBON	470	1/8W	
R052	1-246-787-00	CARBON	2.2K	1/8W	
R053	1-246-783-00	CARBON	1K	1/8W	
R054	1-246-795-00	CARBON	10K	1/8W	
R056	1-246-795-00	CARBON	10K	1/8W	
R058	1-246-781-00	CARBON	680	1/8W	
R059	1-246-791-00	CARBON	4.7K	1/8W	
R060	1-246-852-00	CARBON	5.1K	1/8W	
R061	1-246-794-00	CARBON	8.2K	1/8W	
R062	1-246-808-00	CARBON	120K	1/8W	

Ref.No	Part No	Description				Remark
R065	1-246-459-00	CARBON	270	5%	1/4W	
R066	1-246-785-00	CARBON	1.5K		1/8W	
R067	1-246-787-00	CARBON	2.2K		1/8W	
R068	1-246-769-00	CARBON	68		1/8W	
R069	1-246-461-00	CARBON	330	5%	1/4W	
R070	1-246-769-00	CARBON	68		1/8W	
R071	1-246-782-00	CARBON	820		1/8W	
R072	1-246-796-00	CARBON	12K		1/8W	
R073	1-246-843-00	CARBON	910		1/8W	
R074	1-246-840-00	CARBON	510		1/8W	
R075	1-246-844-00	CARBON	1.1K		1/8W	
R076	1-246-835-00	CARBON	200		1/8W	
R077	1-246-804-00	CARBON	56K		1/8W	
R078	1-246-805-00	CARBON	68K		1/8W	
R079	1-246-791-00	CARBON	4.7K		1/8W	
R080	1-246-799-00	CARBON	22K		1/8W	
R081	1-246-809-00	CARBON	150K		1/8W	
R082	1-246-807-00	CARBON	100K		1/8W	
R083	1-246-787-00	CARBON	2.2K		1/8W	
R084	1-246-783-00	CARBON	1K		1/8W	
R085	1-247-048-00	CARBON	390K		1/8W	
R086	1-247-049-00	CARBON	470K		1/8W	
R087	1-246-796-00	CARBON	12K		1/8W	
R088	1-246-847-00	CARBON	2K		1/8W	
R089	1-246-798-00	CARBON	18K		1/8W	
R090	1-246-863-00	CARBON	43K		1/8W	
R091	1-246-782-00	CARBON	820		1/8W	
R092	1-246-797-00	CARBON	15K		1/8W	
R093	1-246-795-00	CARBON	10K		1/8W	
R094	1-246-844-00	CARBON	1.1K		1/8W	
R095	1-246-783-00	CARBON	1K		1/8W	
R097	1-246-834-00	CARBON	160		1/8W	
R099	1-246-771-00	CARBON	100		1/8W	
R100	1-246-777-00	CARBON	330		1/8W	
R103	1-246-789-00	CARBON	3.3K		1/8W	
R104	1-246-791-00	CARBON	4.7K		1/8W	
R105	1-246-799-00	CARBON	22K		1/8W	
R106	1-246-791-00	CARBON	4.7K		1/8W	
R107	1-246-795-00	CARBON	10K		1/8W	
R108	1-246-794-00	CARBON	8.2K		1/8W	
R109	1-246-799-00	CARBON	22K		1/8W	
R110	1-246-799-00	CARBON	22K		1/8W	
R111	1-246-783-00	CARBON	1K		1/8W	
R112	1-246-783-00	CARBON	1K		1/8W	
R113	1-246-785-00	CARBON	1.5K		1/8W	
R114	1-246-810-00	CARBON	180K		1/8W	
R115	1-246-803-00	CARBON	47K		1/8W	
R116	1-246-803-00	CARBON	47K		1/8W	
R117	1-246-863-00	CARBON	43K		1/8W	
R118	1-246-863-00	CARBON	43K		1/8W	
R119	1-246-795-00	CARBON	10K		1/8W	
R120	1-246-792-00	CARBON	5.6K		1/8W	
R121	1-246-864-00	CARBON	51K		1/8W	

NOTE:

The components identified by shading and mark ⚠ are critical for safety. Replace only with part number specified.

Les composants identifiés par une trame et une marque ⚠ sont critiques pour la sécurité. Ne les remplacer que par une pièce portant le numéro spécifié.

When indicating parts by reference number, please include the board name.

- =>: Due to standardization, interchangeable replacements may be substituted for parts specified in the diagrams.
- Items marked "♠" are not stocked since they are seldom required for routine service. Some delay should be anticipated when ordering these items.

- All variable and adjustable resistors have characteristic curve B, unless otherwise noted.

CAPACITORS
- MF : μF, PF : μμF

RESISTORS
- All resistors are in ohms
- F : nonflammable

COILS
- MMH : mH, UH : μH

Ref.No	Part No	Description			Remark
R122	1-246-801-00	CARBON	33K	1/8W	
R123	1-246-804-00	CARBON	56K	1/8W	
R124	1-246-801-00	CARBON	33K	1/8W	
R125	1-246-801-00	CARBON	33K	1/8W	
R126	1-246-857-00	CARBON	13K	1/8W	
R127	1-246-802-00	CARBON	39K	1/8W	
R128	1-246-807-00	CARBON	100K	1/8W	
R129	1-246-842-00	CARBON	750	1/8W	
R130	1-246-789-00	CARBON	3.3K	1/8W	
R131	1-246-855-00	CARBON	9.1K	1/8W	
R132	1-246-785-00	CARBON	1.5K	1/8W	
R133	1-246-854-00	CARBON	7.5K	1/8W	
R134	1-246-847-00	CARBON	2K	1/8W	
R135	1-246-830-00	CARBON	75	1/8W	
R136	1-246-830-00	CARBON	75	1/8W	
R137	1-246-860-00	CARBON	24K	1/8W	
R138	1-246-841-00	CARBON	620	1/8W	
R139	1-246-783-00	CARBON	1K	1/8W	
R140	1-246-802-00	CARBON	39K	1/8W	
R141	1-246-794-00	CARBON	8.2K	1/8W	
R142	1-246-836-00	CARBON	240	1/8W	
R143	1-246-857-00	CARBON	13K	1/8W	
R144	1-246-865-00	CARBON	62K	1/8W	
R145	1-246-802-00	CARBON	39K	1/8W	
R146	1-246-803-00	CARBON	47K	1/8W	
R148	1-246-850-00	CARBON	3.6K	1/8W	
R149	1-246-850-00	CARBON	3.6K	1/8W	
R206	1-246-775-00	CARBON	220	1/8W	
R207	1-246-801-00	CARBON	33K	1/8W	
R208	1-247-052-00	CARBON	820K	1/8W	
R209	1-247-052-00	CARBON	820K	1/8W	
R211	1-246-789-00	CARBON	3.3K	1/8W	
R212	1-246-787-00	CARBON	2.2K	1/8W	
R213	1-246-783-00	CARBON	1K	1/8W	
R214	1-246-793-00	CARBON	6.8K	1/8W	
R215	1-246-785-00	CARBON	1.5K	1/8W	
R216	1-246-791-00	CARBON	4.7K	1/8W	
R217	1-246-783-00	CARBON	1K	1/8W	
R218	1-246-784-00	CARBON	1.2K	1/8W	
R219	1-246-780-00	CARBON	560	1/8W	
R220	1-246-780-00	CARBON	560	1/8W	
R221	1-246-840-00	CARBON	510	1/8W	
R223	1-246-795-00	CARBON	10K	1/8W	
R224	1-246-854-00	CARBON	7.5K	1/8W	
R225	1-246-851-00	CARBON	4.3K	1/8W	
R226	1-246-871-00	CARBON	200K	1/8W	
R227	1-246-869-00	CARBON	130K	1/8W	
R228	1-246-794-00	CARBON	8.2K	1/8W	
R229	1-246-870-00	CARBON	160K	1/8W	
R230	1-246-771-00	CARBON	100	1/8W	
R231	1-246-779-00	CARBON	470	1/8W	
R232	1-246-783-00	CARBON	1K	1/8W	
R233	1-246-783-00	CARBON	1K	1/8W	

Ref.No	Part No	Description			Remark
R234	1-246-803-00	CARBON	47K	1/8W	
R235	1-246-803-00	CARBON	47K	1/8W	
R236	1-246-803-00	CARBON	47K	1/8W	
R237	1-246-801-00	CARBON	33K	1/8W	
R238	1-246-801-00	CARBON	33K	1/8W	
R239	1-246-785-00	CARBON	1.5K	1/8W	
R240	1-246-771-00	CARBON	100	1/8W	
R241	1-246-789-00	CARBON	3.3K	1/8W	
R242	1-246-856-00	CARBON	11K	1/8W	
R243	1-246-802-00	CARBON	39K	1/8W	
R244	1-246-783-00	CARBON	1K	1/8W	
R245	1-246-791-00	CARBON	4.7K	1/8W	
R246	1-246-791-00	CARBON	4.7K	1/8W	
R247	1-246-797-00	CARBON	15K	1/8W	
R248	1-246-858-00	CARBON	16K	1/8W	
R249	1-246-805-00	CARBON	68K	1/8W	
R251	1-246-802-00	CARBON	39K	1/8W	
R252	1-246-807-00	CARBON	100K	1/8W	
R253	1-246-771-00	CARBON	100	1/8W	
R254	1-246-837-00	CARBON	300	1/8W	
R255	1-246-837-00	CARBON	300	1/8W	
R256	1-246-839-00	CARBON	430	1/8W	
R257	1-246-803-00	CARBON	47K	1/8W	
R258	1-246-799-00	CARBON	22K	1/8W	
R259	1-246-799-00	CARBON	22K	1/8W	
R260	1-247-048-00	CARBON	390K	1/8W	
R261	1-246-787-00	CARBON	2.2K	1/8W	
R262	1-246-801-00	CARBON	33K	1/8W	
R263	1-246-801-00	CARBON	33K	1/8W	
R264	1-246-852-00	CARBON	5.1K	1/8W	
R266	1-246-799-00	CARBON	22K	1/8W	
R301	1-246-777-00	CARBON	330	1/8W	
R302	1-246-791-00	CARBON	4.7K	1/8W	
R303	1-246-791-00	CARBON	4.7K	1/8W	
R304	1-246-805-00	CARBON	68K	1/8W	
R305	1-246-794-00	CARBON	8.2K	1/8W	
R306	1-246-799-00	CARBON	22K	1/8W	
R307	1-246-859-00	CARBON	20K	1/8W	
R308	1-246-857-00	CARBON	13K	1/8W	
R310	1-246-787-00	CARBON	2.2K	1/8W	
R311	1-246-844-00	CARBON	1.1K	1/8W	
R312	1-246-783-00	CARBON	1K	1/8W	
R313	1-246-859-00	CARBON	20K	1/8W	
R314	1-246-769-00	CARBON	68	1/8W	
R315	1-246-848-00	CARBON	2.4K	1/8W	
R317	1-246-847-00	CARBON	2K	1/8W	
R318	1-246-771-00	CARBON	100	1/8W	
R320	1-246-851-00	CARBON	4.3K	1/8W	
R321	1-246-801-00	CARBON	33K	1/8W	
R322	1-246-801-00	CARBON	33K	1/8W	
R323	1-246-795-00	CARBON	10K	1/8W	
R324	1-246-801-00	CARBON	33K	1/8W	
R325	1-246-795-00	CARBON	10K	1/8W	

NOTE:

The components identified by shading and mark ⚠ are critical for safety. Replace only with part number specified.

Les composants identifiés par une trame et une marque ⚠ sont critiques pour la sécurité. Ne les remplacer que par une pièce portant le numéro spécifié.

When indicating parts by reference number, please include the board name.

- =>: Due to standardization, interchangeable replacements may be substituted for parts specified in the diagrams.
- Items marked " ♦ " are not stocked since they are seldom required for routine service. Some delay should be anticipated when ordering these items.

- All variable and adjustable resistors have characteristic curve B, unless otherwise noted.

CAPACITORS
- MF : μF, PF : μμF

RESISTORS
- All resistors are in ohms
- F : nonflammable

COILS
- MMH : mH, UH : μH

VA-3 BOARD

Ref.No	Part No	Description				Remark
R326	1-246-789-00	CARBON	3.3K		1/8W	
R500	1-246-759-00	CARBON	10		1/8W	
R501	1-246-803-00	CARBON	47K		1/8W	
R502	1-246-801-00	CARBON	33K		1/8W	
R503	1-246-803-00	CARBON	47K		1/8W	
R504	1-246-801-00	CARBON	33K		1/8W	
R506	1-246-543-00	CARBON	820K	5%	1/4W	
R507	1-246-513-00	CARBON	47K	5%	1/4W	
R508	1-246-800-00	CARBON	27K		1/8W	
R509	1-246-791-00	CARBON	4.7K		1/8W	
R510	1-246-869-00	CARBON	130K		1/8W	
R511	1-246-521-00	CARBON	100K	5%	1/4W	
R512	1-246-768-00	CARBON	56		1/8W	
R513	1-246-797-00	CARBON	15K		1/8W	
R514	1-246-795-00	CARBON	10K		1/8W	
R515	1-246-852-00	CARBON	5.1K		1/8W	
R516	1-246-846-00	CARBON	1.6K		1/8W	
R517	1-246-796-00	CARBON	12K		1/8W	
R518	1-246-799-00	CARBON	22K		1/8W	
R519	1-246-801-00	CARBON	33K		1/8W	
R520	1-246-801-00	CARBON	33K		1/8W	
R521	1-246-796-00	CARBON	12K		1/8W	
R522	1-246-798-00	CARBON	18K		1/8W	
R523	1-246-793-00	CARBON	6.8K		1/8W	
R525	1-246-801-00	CARBON	33K		1/8W	
R526	1-246-771-00	CARBON	100		1/8W	
R527	1-246-795-00	CARBON	10K		1/8W	
R528	1-246-797-00	CARBON	15K		1/8W	
R531 ⚠.	1-246-980-00	CARBON	3.3	5%	1/8W	F
R532	1-246-771-00	CARBON	100		1/8W	
R533	1-246-795-00	CARBON	10K		1/8W	
R534	1-246-797-00	CARBON	15K		1/8W	
R535	1-246-804-00	CARBON	56K		1/8W	
R536	1-246-804-00	CARBON	56K		1/8W	
R537	1-246-795-00	CARBON	10K		1/8W	
R538	1-246-807-00	CARBON	100K		1/8W	
R539	1-246-866-00	CARBON	75K		1/8W	
R540	1-246-866-00	CARBON	75K		1/8W	
R541	1-246-807-00	CARBON	100K		1/8W	
R542	1-246-807-00	CARBON	100K		1/8W	
R543	1-246-807-00	CARBON	100K		1/8W	
R544	1-246-783-00	CARBON	1K		1/8W	
R545	1-246-783-00	CARBON	1K		1/8W	
R546	1-246-803-00	CARBON	47K		1/8W	
R547	1-246-803-00	CARBON	47K		1/8W	
R548	1-246-799-00	CARBON	22K		1/8W	
R549	1-246-804-00	CARBON	56K		1/8W	
R550	1-246-795-00	CARBON	10K		1/8W	
R551	1-246-811-00	CARBON	220K		1/8W	
R552	1-246-807-00	CARBON	100K		1/8W	
R553	1-246-834-00	CARBON	160		1/8W	
R554	1-246-795-00	CARBON	10K		1/8W	
R555	1-246-811-00	CARBON	220K		1/8W	
R556	1-246-795-00	CARBON	10K		1/8W	
R557	1-246-783-00	CARBON	1K		1/8W	
R558	1-246-803-00	CARBON	47K		1/8W	
R559	1-246-801-00	CARBON	33K		1/8W	
R560	1-246-801-00	CARBON	33K		1/8W	
R561	1-246-791-00	CARBON	4.7K		1/8W	
R562	1-247-047-00	CARBON	330K		1/8W	
R563	1-246-799-00	CARBON	22K		1/8W	
R564	1-246-792-00	CARBON	5.6K		1/8W	
R565	1-202-469-00	COMPOSITION	3.9M	5%	1/4W	
R566	1-246-795-00	CARBON	10K		1/8W	
R567	1-246-771-00	CARBON	100		1/8W	
R568	1-246-799-00	CARBON	22K		1/8W	
R569	1-246-799-00	CARBON	22K		1/8W	
R570	1-246-792-00	CARBON	5.6K		1/8W	
R571	1-246-795-00	CARBON	10K		1/8W	
R572	1-246-795-00	CARBON	10K		1/8W	
R573	1-246-795-00	CARBON	10K		1/8W	
R574	1-246-867-00	CARBON	91K		1/8W	
R575	1-246-793-00	CARBON	6.8K		1/8W	
R577	1-246-793-00	CARBON	6.8K		1/8W	
R578	1-247-049-00	CARBON	470K		1/8W	
R579	1-246-787-00	CARBON	2.2K		1/8W	
R581	1-246-789-00	CARBON	3.3K		1/8W	
R584	1-246-788-00	CARBON	2.7K		1/8W	
R585	1-246-852-00	CARBON	5.1K		1/8W	
R586	1-246-843-00	CARBON	910		1/8W	
R592	1-246-795-00	CARBON	10K		1/8W	
R593	1-246-795-00	CARBON	10K		1/8W	
R594	1-246-796-00	CARBON	12K		1/8W	
R595	1-246-793-00	CARBON	6.8K		1/8W	
R596	1-246-805-00	CARBON	68K		1/8W	
R597	1-246-797-00	CARBON	15K		1/8W	
R598	1-246-796-00	CARBON	12K		1/8W	
R599	1-246-861-00	CARBON	30K		1/8W	
R600	1-246-860-00	CARBON	24K		1/8W	
R601	1-246-792-00	CARBON	5.6K		1/8W	
R602	1-246-791-00	CARBON	4.7K		1/8W	
R603	1-246-780-00	CARBON	560		1/8W	
R604	1-246-786-00	CARBON	1.8K		1/8W	
R605	1-246-799-00	CARBON	22K		1/8W	
R606	1-246-801-00	CARBON	33K		1/8W	
R607	1-246-771-00	CARBON	100		1/8W	
R608	1-246-783-00	CARBON	1K		1/8W	
R610	1-246-793-00	CARBON	6.8K		1/8W	
R611	1-247-047-00	CARBON	330K		1/8W	
R612	1-246-795-00	CARBON	10K		1/8W	
R613	1-246-791-00	CARBON	4.7K		1/8W	
R614	1-246-801-00	CARBON	33K		1/8W	
R615	1-246-793-00	CARBON	6.8K		1/8W	
R616	1-246-797-00	CARBON	15K		1/8W	
R617	1-246-787-00	CARBON	2.2K		1/8W	
R618	1-246-811-00	CARBON	220K		1/8W	

NOTE:

The components identified by shading and mark ⚠ are critical for safety. Replace only with part number specified.

Les composants identifiés par une trame et une marque ⚠ sont critiques pour la sécurité. Ne les remplacer que par une pièce portant le numéro spécifié.

When indicating parts by reference number, please include the board name.

- =>: Due to standardization, interchangeable replacements may be substituted for parts specified in the diagrams.
- Items marked " ♠ " are not stocked since they are seldom required for routine service. Some delay should be anticipated when ordering these items.

- All variable and adjustable resistors have characteristic curve B, unless otherwise noted.

CAPACITORS
- MF : μF, PF : μμF

RESISTORS
- All resistors are in ohms
- F : nonflammable

COILS
- MMH : mH, UH : μH

Ref.No	Part No	Description			Remark
R619	1-246-807-00	CARBON	100K	1/8W	
R620	1-246-811-00	CARBON	220K	1/8W	
R621	1-246-807-00	CARBON	100K	1/8W	
R622	1-246-807-00	CARBON	100K	1/8W	
R623	1-246-811-00	CARBON	220K	1/8W	
R624	1-246-807-00	CARBON	100K	1/8W	
R625	1-246-787-00	CARBON	2.2K	1/8W	
R626	1-246-797-00	CARBON	15K	1/8W	
R627	1-246-783-00	CARBON	1K	1/8W	
R628	1-246-783-00	CARBON	1K	1/8W	
R629	1-246-783-00	CARBON	1K	1/8W	
R630	1-246-791-00	CARBON	4.7K	1/8W	
R631	1-246-784-00	CARBON	1.2K	1/8W	
R632	1-246-796-00	CARBON	12K	1/8W	
R633	1-246-791-00	CARBON	4.7K	1/8W	
R634	1-246-801-00	CARBON	33K	1/8W	
R635	1-246-799-00	CARBON	22K	1/8W	
R636	1-246-807-00	CARBON	100K	1/8W	
R638	1-246-780-00	CARBON	560	1/8W	
R639	1-246-829-00	CARBON	62	1/8W	
R640	1-246-783-00	CARBON	1K	1/8W	
R641	1-246-792-00	CARBON	5.6K	1/8W	
R642	1-246-797-00	CARBON	15K	1/8W	
R643	1-246-791-00	CARBON	4.7K	1/8W	
R647	1-246-801-00	CARBON	33K	1/8W	
R648	1-246-801-00	CARBON	33K	1/8W	
R649	1-247-053-00	CARBON	1M	1/8W	
R650	1-246-783-00	CARBON	1K	1/8W	
R651	1-246-787-00	CARBON	2.2K	1/8W	
R652	1-246-787-00	CARBON	2.2K	1/8W	
R653	1-246-801-00	CARBON	33K	1/8W	
R654	1-246-807-00	CARBON	100K	1/8W	
R655	1-246-783-00	CARBON	1K	1/8W	

VARIABLE RESISTOR

RV001	1-224-249-XX	RES, ADJ, SOLID 1K
RV003	1-224-250-XX	RES, ADJ, SOLID 2.2K
RV004	1-224-251-XX	RES, ADJ, SOLID 4.7K
RV005	1-224-250-XX	RES, ADJ, SOLID 2.2K
RV006	1-224-249-XX	RES, ADJ, SOLID 1K
RV007	1-224-249-XX	RES, ADJ, SOLID 1K
RV008	1-224-250-XX	RES, ADJ, SOLID 2.2K
RV009	1-224-251-XX	RES, ADJ, SOLID 4.7K
RV010	1-224-251-XX	RES, ADJ, SOLID 4.7K
RV011	1-224-251-XX	RES, ADJ, SOLID 4.7K
RV012	1-224-251-XX	RES, ADJ, SOLID 4.7K
RV013	1-224-252-XX	RES, ADJ, SOLID 10K
RV014	1-224-252-XX	RES, ADJ, SOLID 10K
RV015	1-224-250-XX	RES, ADJ, SOLID 2.2K
RV016	1-224-251-XX	RES, ADJ, SOLID 4.7K
RV017	1-224-248-XX	RES, ADJ, SOLID 470
RV019	1-224-254-XX	RES, ADJ, SOLID 47K
RV020	1-224-254-XX	RES, ADJ, SOLID 47K

Ref.No	Part No	Description	Remark
RV021	1-224-250-XX	RES, ADJ, SOLID 2.2K	
RV022	1-224-251-XX	RES, ADJ, SOLID 4.7K	
RV025	1-224-252-XX	RES, ADJ, SOLID 10K	
RV026	1-224-254-XX	RES, ADJ, SOLID 47K	
RV027	1-224-248-XX	RES, ADJ, SOLID 470	
RV028	1-224-248-XX	RES, ADJ, SOLID 470	
RV029	1-224-250-XX	RES, ADJ, SOLID 2.2K	
RV030	1-224-251-XX	RES, ADJ, SOLID 4.7K	
RV500	1-224-254-XX	RES, ADJ, SOLID 47K	
RV501	1-224-255-XX	RES, ADJ, SOLID 100K	
RV502	1-224-251-XX	RES, ADJ, SOLID 4.7K	

RELAY

RY501	1-515-418-00	RELAY
RY502	1-515-416-00	RELAY

SWITCH

SW001	1-552-821-00	SWITCH, SLIDE

TRANSFORMER

T001	1-235-057-00	FILTER, BAND PASS
T002	1-426-065-00	COIL, BPF-1
T003	1-426-070-00	COIL (EQT)
T004	1-409-352-00	COIL, TRAP
T005	1-409-353-00	COIL, TRAP
T006	1-231-412-00	FILTER BLOCK
T007	1-426-089-00	COIL (EQT)
T500	1-433-236-00	TRANSFORMER, OSCILLATOR

CONNECTOR

VCND13	1-507-742-00	JACK, PIN 2P

CRYSTAL

X001	1-527-396-00	CRYSTAL, OSC

****

♦:1-606-272-00 MI-2 BOARD
****

CONNECTOR

CN501	1-507-285-00	JACK

****

♦:A-6711-323-A VL-3 BOARD, COMPLETE
****

	1-246-795-00	CARBON	10K	1/8W
	1-246-795-00	CARBON	10K	1/8W

CAPACITOR

C001	1-123-306-00	ELECT	47MF	20%	10V

NOTE:

The components identified by shading and mark ⚠ are critical for safety.
Replace only with part number specified.

Les composants identifiés par une trame et une marque ⚠ sont critiques pour la sécurité. Ne les remplacer que par une pièce portant le numéro spécifié.

When indicating parts by reference number, please include the board name.

- =>: Due to standardization, interchangeable replacements may be substituted for parts specified in the diagrams.
- Items marked " ♦ " are not stocked since they are seldom required for routine service. Some delay should be anticipated when ordering these items.

- All variable and adjustable resistors have characteristic curve B, unless otherwise noted.

CAPACITORS
- MF : μF, PF : μμF

RESISTORS
- All resistors are in ohms
- F : nonflammable

COILS
- MMH : mH, UH : μH

VL-3 BOARD

Ref.No	Part No	Description			Remark
C002	1-123-616-00	ELECT	4.7MF	20%	25V
C003	1-123-617-00	ELECT	10MF	20%	16V
C004	1-130-022-00	FILM	0.0022MF	5%	50V
C005	1-161-013-00	CERAMIC	0.01MF	10%	25V
C006	1-123-617-00	ELECT	10MF	20%	16V
C007	1-130-532-51	MYLAR	0.22MF	10%	50V
C008	1-123-617-00	ELECT	10MF	20%	16V
C009	1-123-617-00	ELECT	10MF	20%	16V
C010	1-102-074-00	CERAMIC	0.001MF	10%	50V
C011	1-131-404-00	ELECT(SOLID)	0.22MF	10%	25V
C012	1-102-126-00	CERAMIC	0.0056MF	10%	50V
C013	1-123-616-00	ELECT	4.7MF	20%	25V
C014	1-161-013-00	CERAMIC	0.01MF	10%	25V
C015	1-123-306-00	ELECT	47MF	20%	10V
C016	1-123-645-00	ELECT	33MF	20%	10V
C017	1-123-617-00	ELECT	10MF	20%	16V
C018	1-123-617-00	ELECT	10MF	20%	16V
C019	1-123-617-00	ELECT	10MF	20%	16V
C020	1-123-617-00	ELECT	10MF	20%	16V
C021	1-102-118-00	CERAMIC	0.0012MF	10%	50V
C022	1-123-617-00	ELECT	10MF	20%	16V
C023	1-123-617-00	ELECT	10MF	20%	16V
C024	1-131-404-00	ELECT(SOLID)	0.22MF	10%	25V
C025	1-130-029-00	FILM	0.0082MF	5%	50V
C026	1-130-025-00	FILM	0.0039MF	5%	50V
C027	1-123-622-00	ELECT	22MF	20%	16V
C028	1-123-306-00	ELECT	47MF	20%	10V
C029	1-161-013-00	CERAMIC	0.01MF	10%	25V
C030	1-131-342-00	ELECT(SOLID)	0.15MF	10%	25V
C031	1-161-013-00	CERAMIC	0.01MF	10%	25V
C032	1-123-307-00	ELECT	100MF	20%	10V
C033	1-130-028-00	FILM	0.0068MF	5%	50V
C034	1-130-025-00	FILM	0.0039MF	5%	50V
C035	1-130-481-00	MYLAR	0.0068MF	5%	50V
C036	1-131-342-00	ELECT(SOLID)	0.15MF	10%	25V
C037	1-123-306-00	ELECT	47MF	20%	10V
C038	1-130-524-51	MYLAR	0.047MF	10%	50V
C040	1-123-306-00	ELECT	47MF	20%	10V
C041	1-123-613-00	ELECT	3.3MF	20%	50V
C042	1-161-034-00	CERAMIC	0.022MF	20%	25V
C043	1-102-121-00	CERAMIC	0.0022MF	10%	50V
C044	1-123-617-00	ELECT	10MF	20%	16V
C045	1-131-345-00	ELECT(SOLID)	0.47MF	10%	25V
C046	1-131-345-00	ELECT(SOLID)	0.47MF	10%	25V
C047	1-123-617-00	ELECT	10MF	20%	16V
C048	1-130-524-51	MYLAR	0.047MF	10%	50V
C049	1-131-407-00	ELECT(SOLID)	0.68MF	10%	25V
C050	1-102-074-00	CERAMIC	0.001MF	10%	50V
C051	1-123-617-00	ELECT	10MF	20%	16V

CONNECTOR

Ref.No	Part No	Description	Remark
CN001♠:	1-560-472-00	PIN, CONNECTOR 12P	
CN002♠:	1-560-472-00	PIN, CONNECTOR 12P	
CN003♠:	1-560-470-00	PIN, CONNECTOR 8P	
CN004♠:	1-560-466-00	PIN, CONNECTOR 3P	

COMPOSITION CIRCUIT BLOCK

Ref.No	Part No	Description	Remark
CP002	1-231-810-00	COMPOSITION CIRCUIT BLOCK	
CP003	1-231-628-00	COMPOSITION CIRCUIT BLOCK	
CP004	1-231-628-00	COMPOSITION CIRCUIT BLOCK	
CP005	1-231-796-21	COMPOSITION CIRCUIT BLOCK	
CP006	1-231-628-00	COMPOSITION CIRCUIT BLOCK	
CP007	1-231-628-00	COMPOSITION CIRCUIT BLOCK	
CP008	1-232-131-00	COMPOSITION CIRCUIT BLOCK	
CP009	1-232-133-00	COMPOSITION CIRCUIT BLOCK	
CP010	1-231-628-00	COMPOSITION CIRCUIT BLOCK	
CP011	1-232-173-00	COMPOSITION CIRCUIT BLOCK	
CP012	1-232-174-00	COMPOSITION CIRCUIT BLOCK	
CP013	1-232-175-00	COMPOSITION CIRCUIT BLOCK	
CP014	1-231-773-00	COMPOSITION CIRCUIT BLOCK	
CP015	1-231-886-00	COMPOSITION CIRCUIT BLOCK	
CP016	1-231-628-00	COMPOSITION CIRCUIT BLOCK	
CP017	1-232-176-00	COMPOSITION CIRCUIT BLOCK	
CP018	1-232-177-00	COMPOSITION CIRCUIT BLOCK	
CP019	1-232-178-00	COMPOSITION CIRCUIT BLOCK	
CP020	1-232-175-00	COMPOSITION CIRCUIT BLOCK	

DIODE

Ref.No	Part No	Description	Remark
D003	=>8-719-911-19	DIODE 1SS119	
D004	=>8-719-911-19	DIODE 1SS119	
D005	=>8-719-911-19	DIODE 1SS119	
D006	=>8-719-911-19	DIODE 1SS119	
D007	=>8-719-911-19	DIODE 1SS119	
D009	=>8-719-911-19	DIODE 1SS119	
D010	=>8-719-911-19	DIODE 1SS119	
D013	=>8-719-911-19	DIODE 1SS119	
D014	=>8-719-911-19	DIODE 1SS119	
D015	=>8-719-911-19	DIODE 1SS119	

IC

Ref.No	Part No	Description	Remark
IC001	8-759-132-40	IC UPC324C	
IC002	8-759-132-40	IC UPC324C	
IC003	8-759-132-40	IC UPC324C	
IC004	8-759-240-30	IC TC4030BP	
IC005	8-741-104-10	IC 8X-1041	
IC006	8-759-240-66	IC TC4066BP	
IC007	8-759-240-13	IC TC4013BP	
IC008	8-759-240-81	IC TC4081BP	
IC009	=>8-759-345-38	IC HD14538BP	
IC010	8-759-240-11	IC TC4011BP	
IC011	8-759-240-11	IC TC4011BP	
IC012	8-759-240-81	IC TC4081BP	
IC013	8-759-240-11	IC TC4011BP	
IC014	8-759-240-69	IC TC4069UBP	

NOTE:

The components identified by shading and mark ⚠ are critical for safety.
Replace only with part number specified.

Les composants identifiés par une trame et une marque ⚠ sont critiques pour la sécurité. Ne les remplacer que par une pièce portant le numéro spécifié.

When indicating parts by reference number, please include the board name.

- =>: Due to standardization, interchangeable replacements may be substituted for parts specified in the diagrams.
- Items marked "♠" are not stocked since they are seldom required for routine service. Some delay should be anticipated when ordering these items.

- All variable and adjustable resistors have characteristic curve B, unless otherwise noted.

CAPACITORS
- MF : μF, PF : μμF

RESISTORS
- All resistors are in ohms
- F : nonflammable

COILS
- MMH : mH, UH : μH

Ref.No	Part No	Description				Remark
		TRANSISTOR				
Q001	8-729-993-72	TRANSISTOR 2SA937				
Q002	8-729-178-54	TRANSISTOR 2SC2785				
Q003	8-729-178-54	TRANSISTOR 2SC2785				
Q004	8-729-178-54	TRANSISTOR 2SC2785				
Q005	8-729-117-54	TRANSISTOR 2SA1175				
Q006	8-729-178-54	TRANSISTOR 2SC2785				
Q007	8-729-993-72	TRANSISTOR 2SA937				
Q008	8-729-178-54	TRANSISTOR 2SC2785				
Q009	8-729-178-54	TRANSISTOR 2SC2785				
Q010	8-729-117-54	TRANSISTOR 2SA1175				
Q012	8-729-178-54	TRANSISTOR 2SC2785				
Q013	8-729-178-54	TRANSISTOR 2SC2785				
Q014	8-729-117-54	TRANSISTOR 2SA1175				
Q015	8-729-117-54	TRANSISTOR 2SA1175				
Q016	8-729-178-54	TRANSISTOR 2SC2785				
Q017	8-729-178-54	TRANSISTOR 2SC2785				
Q018	8-729-902-11	TRANSISTOR 2SC2021				
Q019	8-729-178-54	TRANSISTOR 2SC2785				
Q020	8-729-178-54	TRANSISTOR 2SC2785				
Q021	8-729-178-54	TRANSISTOR 2SC2785				
Q022	8-729-117-54	TRANSISTOR 2SA1175				
Q023	8-729-117-54	TRANSISTOR 2SA1175				
Q024	8-729-178-54	TRANSISTOR 2SC2785				
Q025	8-729-178-54	TRANSISTOR 2SC2785				
Q026	8-729-117-54	TRANSISTOR 2SA1175				
Q027	8-729-117-54	TRANSISTOR 2SA1175				
Q028	8-729-117-54	TRANSISTOR 2SA1175				
Q029	8-729-117-54	TRANSISTOR 2SA1175				
Q030	=>8-729-902-11	TRANSISTOR 2SC2021				
Q031	8-729-117-54	TRANSISTOR 2SA1175				
Q032	8-729-902-11	TRANSISTOR 2SC2021				
Q033	8-729-117-54	TRANSISTOR 2SA1175				
Q034	8-729-117-54	TRANSISTOR 2SA1175				
Q035	8-729-117-54	TRANSISTOR 2SA1175				
Q036	8-729-117-54	TRANSISTOR 2SA1175				
Q037	8-729-178-54	TRANSISTOR 2SC2785				
		RESISTOR				
R001	1-246-803-00	CARBON	47K		1/8W	
R002	1-246-803-00	CARBON	47K		1/8W	
R003	1-214-154-00	METAL	8.2K	1%	1/4W	
R004	1-214-156-00	METAL	10K	1%	1/4W	
R005	1-246-791-00	CARBON	4.7K		1/8W	
R006	1-247-053-00	CARBON	1M		1/8W	
R011	1-246-791-00	CARBON	4.7K		1/8W	
R012	1-247-053-00	CARBON	1M		1/8W	
R013	1-246-792-00	CARBON	5.6K		1/8W	
R014	1-246-799-00	CARBON	22K		1/8W	
R015	1-246-803-00	CARBON	47K		1/8W	
R016	1-246-807-00	CARBON	100K		1/8W	
R017	1-246-852-00	CARBON	5.1K		1/8W	
R020	1-246-846-00	CARBON	1.6K		1/8W	
R021	1-246-851-00	CARBON	4.3K		1/8W	
R022	1-246-807-00	CARBON	100K		1/8W	
R023	1-246-864-00	CARBON	51K		1/8W	
R024	1-246-807-00	CARBON	100K		1/8W	
R025	1-246-807-00	CARBON	100K		1/8W	
R026	1-246-795-00	CARBON	10K		1/4W	
R032	1-246-781-00	CARBON	680		1/8W	
R033	1-246-807-00	CARBON	100K		1/8W	
R037	1-246-807-00	CARBON	100K		1/8W	
R038	1-214-140-00	METAL	2.2K	1%	1/4W	
R039	1-214-156-00	METAL	10K	1%	1/4W	
R040	1-214-168-00	METAL	33K	1%	1/4W	
R041	1-246-803-00	CARBON	47K		1/8W	
R043	1-247-053-00	CARBON	1M		1/8W	
R044	1-247-053-00	CARBON	1M		1/8W	
R045	1-246-765-00	CARBON	33		1/8W	
R047	1-246-807-00	CARBON	100K		1/8W	
R048	1-246-844-00	CARBON	1.1K		1/8W	
R049	1-246-846-00	CARBON	1.6K		1/8W	
R050	1-246-846-00	CARBON	1.6K		1/8W	
R052	1-246-791-00	CARBON	4.7K		1/8W	
R053	1-246-801-00	CARBON	33K		1/8W	
R055	1-247-053-00	CARBON	1M		1/8W	
R058	1-246-792-00	CARBON	5.6K		1/8W	
R061	1-246-848-00	CARBON	2.4K		1/8W	
R062	1-246-803-00	CARBON	47K		1/8W	
R063	1-246-783-00	CARBON	1K		1/8W	
R064	1-246-783-00	CARBON	1K		1/8W	
R065	1-246-783-00	CARBON	1K		1/8W	
R066	1-246-804-00	CARBON	56K		1/8W	
R067	1-246-804-00	CARBON	56K		1/8W	
R068	1-246-807-00	CARBON	100K		1/8W	
R069	1-246-803-00	CARBON	47K		1/8W	
R070	1-246-850-00	CARBON	3.6K		1/8W	
R071	1-246-805-00	CARBON	68K		1/8W	
R072	1-246-804-00	CARBON	56K		1/8W	
R073	1-246-804-00	CARBON	56K		1/8W	
R074	1-246-803-00	CARBON	47K		1/8W	
R075	1-246-795-00	CARBON	10K		1/8W	
R076	1-246-795-00	CARBON	10K		1/8W	
R077	1-246-807-00	CARBON	100K		1/8W	
R078	1-246-807-00	CARBON	100K		1/8W	
R080	1-246-803-00	CARBON	47K		1/8W	
R084	1-246-791-00	CARBON	4.7K		1/8W	
R085	1-246-807-00	CARBON	100K		1/8W	
R086	1-214-780-00	METAL	130K	1%	1/4W	
R087	1-214-786-00	METAL	240K	1%	1/4W	
R088	1-246-775-00	CARBON	220		1/8W	
R089	1-246-805-00	CARBON	68K		1/8W	
R090	1-246-803-00	CARBON	47K		1/8W	
R091	1-246-803-00	CARBON	47K		1/8W	
R092	1-247-053-00	CARBON	1M		1/8W	

NOTE:

The components identified by shading and mark ⚠ are critical for safety.
Replace only with part number specified.

Les composants identifiés par une trame et une marque ⚠ sont critiques pour la sécurité. Ne les remplacer que par une pièce portant le numéro spécifié.

When indicating parts by reference number, please include the board name.

- =>: Due to standardization, interchangeable replacements may be substituted for parts specified in the diagrams.
- Items marked " ● " are not stocked since they are seldom required for routine service. Some delay should be anticipated when ordering these items.

- All variable and adjustable resistors have characteristic curve B, unless otherwise noted.

CAPACITORS
- MF : μF, PF : μμF

RESISTORS
- All resistors are in ohms
- F : nonflammable

COILS
- MMH : mH, UH : μH

VL-3 BOARD

SS-10A BOARD

Ref.No	Part No	Description				Remark
R093	1-246-777-00	CARBON	330		1/8W	
R094	1-246-803-00	CARBON	47K		1/8W	
R095	1-246-803-00	CARBON	47K		1/8W	
R096	1-246-807-00	CARBON	100K		1/8W	
R097	1-246-807-00	CARBON	100K		1/8W	
R100	1-246-771-00	CARBON	100		1/8W	
R101	1-246-795-00	CARBON	10K		1/8W	
R102	1-246-783-00	CARBON	1K		1/8W	
R103	1-246-795-00	CARBON	10K		1/8W	
R104	1-246-795-00	CARBON	10K		1/8W	
R105	1-246-803-00	CARBON	47K		1/8W	
R106	1-214-174-00	METAL	56K	1%	1/4W	
R107	1-214-178-00	METAL	82K	1%	1/4W	
R108	1-214-150-00	METAL	5.6K	1%	1/4W	
R109	1-246-783-00	CARBON	1K		1/8W	
R110	1-246-807-00	CARBON	100K		1/8W	
R111	1-246-799-00	CARBON	22K		1/8W	
R112	1-246-807-00	CARBON	100K		1/8W	
R113	1-214-163-00	METAL	20K	1%	1/4W	
R114	1-214-167-00	METAL	30K	1%	1/4W	
R115	1-246-790-00	CARBON	3.9K		1/8W	
R116	1-246-807-00	CARBON	100K		1/8W	
R117	1-214-142-00	METAL	2.7K	1%	1/4W	
R118	1-214-132-00	METAL	1K	1%	1/4W	
R121	1-246-803-00	CARBON	47K		1/8W	
R122	1-246-803-00	CARBON	47K		1/8W	
R123	1-246-802-00	CARBON	39K		1/8W	
R124	1-246-795-00	CARBON	10K		1/8W	
R125	1-246-857-00	CARBON	13K		1/8W	
R126	1-246-801-00	CARBON	33K		1/8W	
R127	1-246-803-00	CARBON	47K		1/8W	
R128	1-246-783-00	CARBON	1K		1/8W	
R129	1-246-861-00	CARBON	30K		1/8W	
R130	1-246-857-00	CARBON	13K		1/8W	
R131	1-214-156-00	METAL	10K	1%	1/4W	
R132	1-246-803-00	CARBON	47K		1/8W	
R133	1-246-851-00	CARBON	4.3K		1/8W	
R134	1-246-795-00	CARBON	10K		1/8W	
R135	1-246-803-00	CARBON	47K		1/8W	
R136	1-246-803-00	CARBON	47K		1/8W	
R137	1-246-778-00	CARBON	390		1/8W	
R138	1-246-807-00	CARBON	100K		1/8W	
R139	1-214-145-00	METAL	3.6K	1%	1/4W	
R140	1-246-807-00	CARBON	100K		1/8W	
R141	1-246-807-00	CARBON	100K		1/8W	
R142	1-214-134-00	METAL	1.2K	1%	1/4W	
R146	1-246-807-00	CARBON	100K		1/8W	
R147	1-246-807-00	CARBON	100K		1/8W	
R148	1-214-158-00	METAL	12K	1%	1/4W	
R149	1-214-153-00	METAL	7.5K	1%	1/4W	
R154	1-246-783-00	CARBON	1K		1/8W	
R156	1-246-869-00	CARBON	130K		1/8W	
R157	1-246-807-00	CARBON	100K		1/8W	

Ref.No	Part No	Description				Remark
R158	1-246-783-00	CARBON	1K		1/8W	
R159	1-246-807-00	CARBON	100K		1/8W	
R160	1-246-807-00	CARBON	100K		1/8W	
R161	1-246-850-00	CARBON	3.6K		1/8W	
R162	1-214-152-00	METAL	6.8K	1%	1/4W	
R164	1-246-791-00	CARBON	4.7K		1/8W	
R171	1-246-807-00	CARBON	100K		1/8W	

VARIABLE RESISTOR

Ref.No	Part No	Description
RV001	1-224-252-XX	RES, ADJ, METAL GLAZE 10K
RV002	1-226-773-00	RES, ADJ, METAL GLAZE 22K
RV003	1-224-251-XX	RES, ADJ, METAL GLAZE 4.7K
RV004	1-224-253-XX	RES, ADJ, METAL GLAZE 22K
RV005	1-224-253-XX	RES, ADJ, METAL GLAZE 22K
RV006	1-224-256-XX	RES, ADJ, METAL GLAZE 220K
RV007	1-224-256-XX	RES, ADJ, METAL GLAZE 220K
RV008	1-224-256-XX	RES, ADJ, METAL GLAZE 220K
RV009	1-224-256-XX	RES, ADJ, METAL GLAZE 220K
RV010	1-226-703-00	RES, ADJ, METAL GLAZE 10K
RV011	1-226-775-00	RES, ADJ, METAL GLAZE 100K
RV012	1-224-256-XX	RES, ADJ, METAL GLAZE 220K
RV013	1-224-256-XX	RES, ADJ, METAL GLAZE 220K
RV014	1-228-270-00	RES, VAR, CARBON 10K
RV015	1-226-775-00	RES, ADJ, METAL GLAZE 100K
RV016	1-224-250-XX	RES, ADJ, METAL GLAZE 2.2K
RV017	1-224-255-XX	RES, ADJ, METAL GLAZE 100K
RV018	1-226-773-00	RES, ADJ, METAL GLAZE 22K

****

♦:A-6715-131-A SS-10A BOARD, COMPLETE
****

Part No	Description
3-572-085-00	WASHER, FIBER
♦:3-655-214-00	CLIP, CABLE
♦:3-671-839-00	CASE (MAIN), SHIELD, SS-10
3-703-044-26	LABEL, CAUTION

CAPACITOR

Ref.No	Part No	Description			
C001	1-123-318-00	ELECT	33MF	20%	16V
C002	1-161-057-00	CERAMIC	0.033MF	10%	50V
C003	1-123-617-00	ELECT	10MF	20%	16V
C004	1-123-617-00	ELECT	10MF	20%	16V
C005	1-161-039-00	CERAMIC	0.001MF	10%	25V
C006	1-123-333-00	ELECT	100MF	20%	16V
C007	1-123-318-00	ELECT	33MF	20%	16V
C008	1-161-057-00	CERAMIC	0.033MF	10%	50V
C009	1-130-482-00	MYLAR	0.0082MF	5%	50V
C010	1-130-482-00	MYLAR	0.0082MF	5%	50V
C011	1-123-612-00	ELECT	2.2MF	20%	50V
C012	1-123-612-00	ELECT	2.2MF	20%	50V
C013	1-123-611-00	ELECT	1MF	20%	50V
C014	1-123-611-00	ELECT	1MF	20%	50V
C015	1-123-611-00	ELECT	1MF	20%	50V

NOTE:

The components identified by shading and mark ⚠ are critical for safety. Replace only with part number specified.

Les composants identifiés par une trame et une marque ⚠ sont critiques pour la sécurité. Ne les remplacer que par une pièce portant le numéro spécifié.

When indicating parts by reference number, please include the board name.

- =>: Due to standardization, interchangeable replacements may be substituted for parts specified in the diagrams.
- Items marked " ♦ " are not stocked since they are seldom required for routine service. Some delay should be anticipated when ordering these items.

- All variable and adjustable resistors have characteristic curve B, unless otherwise noted.

CAPACITORS
- MF : μF, PF : μμF

RESISTORS
- All resistors are in ohms
- F : nonflammable

COILS
- MMH : mH, UH : μH

SS-10A BOARD

Ref.No	Part No	Description			Remark
C016	1-123-611-00	ELECT	1MF	20%	50V
C017	1-123-617-00	ELECT	10MF	20%	16V
C018	1-123-318-00	ELECT	33MF	20%	16V
C019	1-161-057-00	CERAMIC	0.033MF	10%	50V
C020	1-123-318-00	ELECT	33MF	20%	16V
C021	1-161-057-00	CERAMIC	0.033MF	10%	50V
C022	1-123-611-00	ELECT	1MF	20%	50V
C023	1-123-611-00	ELECT	1MF	20%	50V
C024	1-161-009-00	CERAMIC	0.0047MF	10%	25V
C026	1-161-039-00	CERAMIC	0.001MF	10%	25V
C028	1-123-611-00	ELECT	1MF	20%	50V
C029	1-123-613-00	ELECT	3.3MF	20%	50V
C030	1-123-318-00	ELECT	33MF	20%	16V
C031	1-161-057-00	CERAMIC	0.033MF	10%	50V
C032	1-161-057-00	CERAMIC	0.033MF	10%	50V
C033	1-123-318-00	ELECT	33MF	20%	16V
C034	1-161-057-00	CERAMIC	0.033MF	10%	50V
C035	1-161-021-00	CERAMIC	0.047MF	10%	25V
C036	1-161-021-00	CERAMIC	0.047MF	10%	25V
C037	1-161-005-00	CERAMIC	0.0022MF	10%	25V
C038	1-123-616-00	ELECT	4.7MF	20%	25V
C039	1-161-057-00	CERAMIC	0.033MF	10%	50V
C040	1-161-057-00	CERAMIC	0.033MF	10%	50V
C041	1-123-611-00	ELECT	1MF	20%	50V
C042	1-161-772-11	CERAMIC	0.1MF	10%	25V
C043	1-161-025-00	CERAMIC	0.1MF	10%	25V
C044	1-161-005-00	CERAMIC	0.0022MF	10%	25V
C045	1-161-005-00	CERAMIC	0.0022MF	10%	25V
C301	1-161-021-00	CERAMIC	0.047MF	10%	25V
C302	1-130-491-51	MYLAR	0.047MF	5%	50V
C303	1-130-491-51	MYLAR	0.047MF	5%	50V
C304	1-123-613-00	ELECT	3.3MF	20%	50V
C305	1-123-613-00	ELECT	3.3MF	20%	50V
C306	1-123-613-00	ELECT	3.3MF	20%	50V
C307	1-130-483-51	MYLAR	0.01MF	5%	50V
C308	1-161-013-00	CERAMIC	0.01MF	10%	25V
C309	1-130-483-51	MYLAR	0.01MF	5%	50V
C310	1-123-296-00	ELECT	220MF	20%	6.3V
C311	1-161-021-00	CERAMIC	0.047MF	10%	25V
C312	1-161-017-00	CERAMIC	0.022MF	10%	25V
C317	1-123-611-00	ELECT	1MF	20%	50V
C318	1-123-618-00	ELECT	22MF	20%	6.3V
C319	1-123-333-00	ELECT	100MF	20%	16V
C321	1-123-318-00	ELECT	33MF	20%	16V
C322	1-123-318-00	ELECT	33MF	20%	16V
C323	1-161-021-00	CERAMIC	0.047MF	10%	25V
C325	1-130-483-51	MYLAR	0.01MF	5%	50V
C326	1-123-306-00	ELECT	47MF	20%	10V
C327	1-123-612-00	ELECT	2.2MF	20%	50V
C328	1-131-404-00	ELECT(SOLID)	0.22MF	10%	25V
C330	1-123-617-00	ELECT	10MF	20%	16V
C331	1-161-017-00	CERAMIC	0.022MF	10%	25V
C332	1-161-016-00	CERAMIC	0.018MF	10%	25V

Ref.No	Part No	Description			Remark
C332	1-161-016-00	CERAMIC	0.018MF	10%	25V
C333	1-161-002-00	CERAMIC	0.0012MF	10%	25V
C334	1-161-013-00	CERAMIC	0.01MF	10%	25V
C335	1-130-493-51	MYLAR	0.068MF	5%	50V
C336	1-123-613-00	ELECT	3.3MF	20%	50V
C337	1-102-978-00	CERAMIC	220PF	5%	50V
C338	1-123-294-00	ELECT	47MF	20%	6.3V
C339	1-123-616-00	ELECT	4.7MF	20%	25V
C340	1-123-616-00	ELECT	4.7MF	20%	25V
C341	1-130-488-00	MYLAR	0.027MF	5%	50V
C342	1-123-622-00	ELECT	22MF	20%	16V
C343	1-123-294-00	ELECT	47MF	20%	6.3V
C344	1-123-295-00	ELECT	100MF	20%	6.3V
C345	1-161-017-00	CERAMIC	0.022MF	10%	25V
C346	1-161-013-00	CERAMIC	0.01MF	10%	25V
C347	1-161-016-00	CERAMIC	0.018MF	10%	25V
C348	1-131-368-00	TANTALUM	3.3MF	20%	16V
C349	1-131-347-00	TANTALUM	1MF	20%	35V
C350	1-123-294-00	ELECT	47MF	20%	6.3V
C351	1-123-612-00	ELECT	2.2MF	20%	50V
C353	1-161-013-00	CERAMIC	0.01MF	10%	25V
C354	1-102-824-00	CERAMIC	430PF	5%	50V
C355	1-161-013-00	CERAMIC	0.01MF	10%	25V
C356	1-123-611-00	ELECT	1MF	20%	50V
C361	1-123-616-00	ELECT	4.7MF	20%	25V
C362	1-123-616-00	ELECT	4.7MF	20%	25V
C370	1-161-021-00	CERAMIC	0.047MF	10%	25V
C371	1-161-021-00	CERAMIC	0.047MF	10%	25V
C372	1-130-486-51	MYLAR	0.018MF	5%	50V
C373	1-123-616-00	ELECT	4.7MF	20%	25V
C374	1-161-021-00	CERAMIC	0.047MF	10%	25V
C401	1-123-021-00	ELECT	0.47MF	30%	50V
C402	1-123-616-00	ELECT	4.7MF	20%	25V
C403	1-101-888-00	CERAMIC	68PF	5%	50V
C601	1-123-612-00	ELECT	2.2MF	20%	50V
C603	1-101-880-00	CERAMIC	47PF	5%	50V
C604	1-101-880-00	CERAMIC	47PF	5%	50V
C605	1-123-617-00	ELECT	10MF	20%	16V
C606	1-123-617-00	ELECT	10MF	20%	16V
C607	1-123-610-00	ELECT	0.47MF	20%	50V
C608	1-123-617-00	ELECT	10MF	20%	16V
C609	1-101-884-00	CERAMIC	56PF	5%	50V
C610	1-161-021-00	CERAMIC	0.047MF	10%	25V
C611	1-161-021-00	CERAMIC	0.047MF	10%	25V
C612	1-161-021-00	CERAMIC	0.047MF	10%	25V
C613	1-161-021-00	CERAMIC	0.047MF	10%	25V
C614	1-161-021-00	CERAMIC	0.047MF	10%	25V
C615	1-161-021-00	CERAMIC	0.047MF	10%	25V
C616	1-161-021-00	CERAMIC	0.047MF	10%	25V
C617	1-161-021-00	CERAMIC	0.047MF	10%	25V
C618	1-161-021-00	CERAMIC	0.047MF	10%	25V
C619	1-123-306-00	ELECT	47MF	20%	10V
C620	1-123-318-00	ELECT	33MF	20%	16V

NOTE:

The components identified by shading and mark ⚠ are critical for safety. Replace only with part number specified.

Les composants identifiés par une trame et une marque ⚠ sont critiques pour la sécurité. Ne les remplacer que par une pièce portant le numéro spécifié.

When indicating parts by reference number, please include the board name.

- =>: Due to standardization, interchangeable replacements may be substituted for parts specified in the diagrams.
- Items marked " ♠ " are not stocked since they are seldom required for routine service. Some delay should be anticipated when ordering these items.

- All variable and adjustable resistors have characteristic curve B, unless otherwise noted.

CAPACITORS
- MF : μF, PF : μμF

RESISTORS
- All resistors are in ohms
- F : nonflammable

COILS
- MMH : mH, UH : μH

SS-10A BOARD

Ref.No	Part No	Description			Remark
C621	1-123-318-00	ELECT	33MF	20%	16V
C622	1-161-023-00	CERAMIC	0.068MF	10%	25V
C630	1-161-021-00	CERAMIC	0.047MF	10%	25V
C640	1-161-017-00	CERAMIC	0.022MF	10%	25V

CONNECTOR

Ref.No	Part No	Description
CN001♠	1-560-466-00	PIN, CONNECTOR 3P
CN002♠	1-560-466-00	PIN, CONNECTOR 3P
CN003♠	1-560-469-00	PIN, CONNECTOR 6P
CN301♠	1-560-467-00	PIN, CONNECTOR 4P
CN302♠	1-560-466-00	PIN, CONNECTOR 3P
CN303♠	1-560-467-00	PIN, CONNECTOR 4P
CN304♠	1-560-456-00	PIN, CONNECTOR 2P
CN305♠	1-560-467-00	PIN, CONNECTOR 4P
CN306♠	1-560-466-00	PIN, CONNECTOR 3P
CN307♠	1-560-467-00	PIN, CONNECTOR 4P
CN308♠	1-560-472-00	PIN, CONNECTOR 12P
CN309♠	1-560-456-00	PIN, CONNECTOR 2P
CN310♠	1-560-460-00	PIN, CONNECTOR 4P
CN601♠	1-560-468-00	PIN, CONNECTOR 5P
CN602♠	1-560-470-00	PIN, CONNECTOR 8P
CN603♠	1-560-470-00	PIN, CONNECTOR 8P
CN604♠	1-560-470-00	PIN, CONNECTOR 8P
CN608♠	1-560-467-00	PIN, CONNECTOR 4P
CN609♠	1-560-468-00	PIN, CONNECTOR 5P
CN610♠	1-560-469-00	PIN, CONNECTOR 6P
CN611♠	1-560-470-00	PIN, CONNECTOR 8P
CN612♠	1-560-467-00	PIN, CONNECTOR 4P
CN613♠	1-560-470-00	PIN, CONNECTOR 8P
CN614♠	1-560-471-00	PIN, CONNECTOR 10P
CN615♠	1-560-467-00	PIN, CONNECTOR 4P
CN616♠	1-560-467-00	PIN, CONNECTOR 4P
CN617♠	1-560-467-00	PIN, CONNECTOR 4P
CN618♠	1-560-467-00	PIN, CONNECTOR 4P
CN619♠	1-560-467-00	PIN, CONNECTOR 4P
CN620♠	1-560-468-00	PIN, CONNECTOR 5P
CN621♠	1-560-471-00	PIN, CONNECTOR 10P
CN622♠	1-560-471-00	PIN, CONNECTOR 10P
CN623♠	1-560-469-00	PIN, CONNECTOR 6P
CN624♠	1-560-470-00	PIN, CONNECTOR 8P
CN625♠	1-560-472-00	PIN, CONNECTOR 12P
CN626♠	1-560-471-00	PIN, CONNECTOR 10P
CN627♠	1-560-470-00	PIN, CONNECTOR 8P

COMPOSITION CIRCUIT BLOCK

Ref.No	Part No	Description
CP001	1-232-055-00	COMPOSITION CIRCUIT BLOCK
CP004	1-232-057-00	COMPOSITION CIRCUIT BLOCK
CP005	1-232-058-00	COMPOSITION CIRCUIT BLOCK
CP006	1-232-059-00	COMPOSITION CIRCUIT BLOCK
CP007	1-232-060-00	COMPOSITION CIRCUIT BLOCK
CP008	1-232-060-00	COMPOSITION CIRCUIT BLOCK
CP009	1-232-061-00	COMPOSITION CIRCUIT BLOCK
CP010	1-232-061-00	COMPOSITION CIRCUIT BLOCK

Ref.No	Part No	Description	Remark
CP011	1-232-062-00	COMPOSITION CIRCUIT BLOCK	
CP012	1-232-069-00	COMPOSITION CIRCUIT BLOCK	
CP013	1-232-063-00	COMPOSITION CIRCUIT BLOCK	
CP014	1-232-059-00	COMPOSITION CIRCUIT BLOCK	
CP015	1-232-064-00	COMPOSITION CIRCUIT BLOCK	
CP016	1-232-169-00	COMPOSITION CIRCUIT BLOCK	
CP017	1-232-169-00	COMPOSITION CIRCUIT BLOCK	
CP018	1-232-066-00	COMPOSITION CIRCUIT BLOCK	
CP019	1-232-067-00	COMPOSITION CIRCUIT BLOCK	
CP020	1-232-059-00	COMPOSITION CIRCUIT BLOCK	
CP021	1-232-068-00	COMPOSITION CIRCUIT BLOCK	
CP022	1-232-062-00	COMPOSITION CIRCUIT BLOCK	
CP023	1-232-061-00	COMPOSITION CIRCUIT BLOCK	
CP024	1-232-061-00	COMPOSITION CIRCUIT BLOCK	
CP025	1-232-069-00	COMPOSITION CIRCUIT BLOCK	
CP026	1-232-139-00	COMPOSITION CIRCUIT BLOCK	
CP027	1-232-142-00	COMPOSITION CIRCUIT BLOCK	
CP028	1-232-143-00	COMPOSITION CIRCUIT BLOCK	
CP030	1-232-144-00	COMPOSITION CIRCUIT BLOCK	
CP031	1-232-218-00	COMPOSITION CIRCUIT BLOCK	
CP032	1-232-146-00	COMPOSITION CIRCUIT BLOCK	
CP033	1-232-147-00	COMPOSITION CIRCUIT BLOCK	
CP301	1-232-136-00	COMPOSITION CIRCUIT BLOCK	
CP303	1-232-137-00	COMPOSITION CIRCUIT BLOCK	
CP304	1-232-138-00	COMPOSITION CIRCUIT BLOCK	
CP312	1-232-140-00	COMPOSITION CIRCUIT BLOCK	
CP313	1-232-141-00	COMPOSITION CIRCUIT BLOCK	
CP315	1-232-151-00	COMPOSITION CIRCUIT BLOCK	
CP316	1-232-151-00	COMPOSITION CIRCUIT BLOCK	
CP317	1-232-079-00	COMPOSITION CIRCUIT BLOCK	
CP318	1-232-071-00	COMPOSITION CIRCUIT BLOCK	
CP319	1-232-148-00	COMPOSITION CIRCUIT BLOCK	
CP322	1-232-152-00	COMPOSITION CIRCUIT BLOCK	
CP323	1-232-148-00	COMPOSITION CIRCUIT BLOCK	
CP324	1-232-150-00	COMPOSITION CIRCUIT BLOCK	
CP326	1-232-152-00	COMPOSITION CIRCUIT BLOCK	
CP328	1-232-126-00	COMPOSITION CIRCUIT BLOCK	
CP329	1-232-150-00	COMPOSITION CIRCUIT BLOCK	
CP335	1-232-149-00	COMPOSITION CIRCUIT BLOCK	
CP601	1-232-158-00	COMPOSITION CIRCUIT BLOCK	
CP602	1-232-158-00	COMPOSITION CIRCUIT BLOCK	
CP605	1-232-157-00	COMPOSITION CIRCUIT BLOCK	
CP606	1-232-159-00	COMPOSITION CIRCUIT BLOCK	
CP607	1-232-159-00	COMPOSITION CIRCUIT BLOCK	
CP609	1-232-154-00	COMPOSITION CIRCUIT BLOCK	
CP610	1-232-155-00	COMPOSITION CIRCUIT BLOCK	
CP612	1-232-156-00	COMPOSITION CIRCUIT BLOCK	
CP613	1-232-163-00	COMPOSITION CIRCUIT BLOCK	
CP614	1-232-163-00	COMPOSITION CIRCUIT BLOCK	
CP615	1-232-153-00	COMPOSITION CIRCUIT BLOCK	

DIODE

Ref.No	Part No	Description	Remark
D001	8-719-911-06	DIODE 1SS106	

NOTE:

The components identified by shading and mark ⚠ are critical for safety. Replace only with part number specified.

Les composants identifiés par une trame et une marque ⚠ sont critiques pour la sécurité. Ne les remplacer que par une pièce portant le numéro spécifié.

When indicating parts by reference number, please include the board name.

- =>: Due to standardization, interchangeable replacements may be substituted for parts specified in the diagrams.
- Items marked " ♠ " are not stocked since they are seldom required for routine service. Some delay should be anticipated when ordering these items.
- All variable and adjustable resistors have characteristic curve B, unless otherwise noted.

CAPACITORS
- MF : μF, PF : μμF

RESISTORS
- All resistors are in ohms
- F : nonflammable

COILS
- MMH : mH, UH : μH

Ref.No	Part No	Description	Remark
D002	8-719-911-06	DIODE 1SS106	
D003	8-719-911-19	DIODE 1SS119	
D008	8-719-911-19	DIODE 1SS119	
D009	8-719-982-04	DIODE ERB81-004	
D010	8-719-911-19	DIODE 1SS119	
D012	8-719-911-19	DIODE 1SS119	
D013	8-719-982-04	DIODE ERB81-004	
D014	8-719-911-19	DIODE 1SS119	
D015	8-719-911-19	DIODE 1SS119	
D301	8-719-911-06	DIODE 1SS106	
D302	8-719-911-19	DIODE 1SS119	
D303	8-719-982-04	DIODE ERB81-004	
D304	8-719-113-07	DIODE RD13E-B	
D305	8-719-911-06	DIODE 1SS106	
D306	8-719-911-19	DIODE 1SS119	
D307	8-719-911-19	DIODE 1SS119	
D308	8-719-911-06	DIODE 1SS106	
D309	8-719-911-19	DIODE 1SS119	
D310	8-719-911-19	DIODE 1SS119	
D311	8-719-911-19	DIODE 1SS119	
D312	8-719-911-19	DIODE 1SS119	
D313	8-719-911-19	DIODE 1SS119	
D314	8-719-911-19	DIODE 1SS119	
D315	8-719-911-19	DIODE 1SS119	
D316	8-719-911-19	DIODE 1SS119	
D317	8-719-911-19	DIODE 1SS119	
D318	8-719-911-19	DIODE 1SS119	
D401	8-719-911-19	DIODE 1SS119	
D603	=>8-719-901-33	DIODE 1SS133	
D604	8-719-911-06	DIODE 1SS106	
D612	8-719-911-06	DIODE 1SS106	

FUSE

Ref.No	Part No	Description	Remark
F601⚠.	1-532-625-00	FUSE, GLASS TUBE 1.25A 125V	
F602⚠.	1-532-624-00	FUSE, GLASS TUBE 0.5A 125V	
F603⚠.	1-532-595-00	FUSE, GLASS TUBE 3.15A 125V	
F604	1-532-605-00	FUSE, ELECTRIC CURRENT	

IC

Ref.No	Part No	Description	Remark
IC001	8-759-103-93	IC UPC393C	
IC002	8-759-132-40	IC UPC324C	
IC003	8-759-132-40	IC UPC324C	
IC004	8-759-103-93	IC UPC393C	
IC005	8-743-980-00	IC BX-3980	
IC006	8-743-976-00	IC BX-3976	
IC301	8-751-940-02	IC CX-194A-2	
IC302	=>8-743-984-00	IC BX-3984	
IC303	8-743-983-00	IC BX-3983	
IC304	8-759-132-40	IC UPC324C	
IC305	8-759-904-94	IC TL494CN	
IC306	8-743-978-00	IC BX-3978	
IC307	8-759-240-30	IC TC4030BP	
IC308	8-759-240-53	IC TC4053BP	
IC309	8-741-103-90	IC BX-1039	
IC310	8-743-981-00	IC BX-3981	
IC311	8-741-103-80	IC BX-1038	
IC312	8-759-250-26	IC TC5026BP	
IC313	8-759-240-51	IC TC4051BP	
IC314	8-741-013-10	IC BX-1013-1	
IC601	8-759-985-27	IC MB8845-527	
IC602	8-759-985-28	IC MB8845-528	
IC603	8-759-900-45	IC MB8845-549	
IC604	8-759-133-90	IC UPC339C	
IC605	8-759-220-04	IC TC40H004P	
IC606	8-759-240-69	IC TC4069UBP	
IC607	=>8-759-240-13	IC TC4013BP	
IC608	8-759-987-47	IC MB8747	
IC609	8-759-987-47	IC MB8747	
IC610	8-743-988-00	IC BX-3988	
IC611	8-759-900-04	IC SN74LS04N	
IC612	8-741-101-60	IC BX-1016	

COIL

Ref.No	Part No	Description	Remark
L001	1-408-519-00	COIL, CHOKE 42UH	
L002	1-408-519-00	COIL, CHOKE 42UH	
L003	1-408-519-00	COIL, CHOKE 42UH	
L301	1-408-518-00	COIL, CHOKE 1MMH	
L302	1-459-232-00	COIL, CORE 90UH	
L601	1-408-409-00	MICRO INDUCTOR 10UH	
L602	1-408-409-00	MICRO INDUCTOR 10UH	

TRANSISTOR

Ref.No	Part No	Description	Remark
Q001	8-729-117-54	TRANSISTOR 2SA1175	
Q002	8-729-178-54	TRANSISTOR 2SC2785	
Q003	8-729-178-54	TRANSISTOR 2SC2785	
Q004	8-729-178-54	TRANSISTOR 2SC2785	
Q006	8-729-178-54	TRANSISTOR 2SC2785	
Q007	8-729-178-54	TRANSISTOR 2SC2785	
Q008	8-729-117-54	TRANSISTOR 2SA1175	
Q009	8-729-178-54	TRANSISTOR 2SC2785	
Q010	8-729-178-54	TRANSISTOR 2SC2785	
Q011	8-729-178-54	TRANSISTOR 2SC2785	
Q012	8-729-178-54	TRANSISTOR 2SC2785	
Q013	8-729-178-54	TRANSISTOR 2SC2785	
Q014	8-729-178-54	TRANSISTOR 2SC2785	
Q015	8-729-178-54	TRANSISTOR 2SC2785	
Q016	8-729-117-54	TRANSISTOR 2SA1175	
Q017	8-729-113-33	TRANSISTOR 2SB733	
Q018	8-729-113-33	TRANSISTOR 2SB733	
Q019	8-729-178-54	TRANSISTOR 2SC2785	
Q020	8-729-178-54	TRANSISTOR 2SC2785	
Q021	8-729-178-54	TRANSISTOR 2SC2785	
Q022	8-729-178-54	TRANSISTOR 2SC2785	
Q023	8-729-178-54	TRANSISTOR 2SC2785	
Q024	8-729-117-54	TRANSISTOR 2SA1175	
Q025	8-729-113-33	TRANSISTOR 2SB733	

NOTE:

The components identified by shading and mark ⚠ are critical for safety. Replace only with part number specified.

Les composants identifiés par une trame et une marque ⚠ sont critiques pour la sécurité. Ne les remplacer que par une pièce portant le numéro spécifié.

When indicating parts by reference number, please include the board name.

- =>: Due to standardization, interchangeable replacements may be substituted for parts specified in the diagrams.
- Items marked " ♠ " are not stocked since they are seldom required for routine service. Some delay should be anticipated when ordering these items.

- All variable and adjustable resistors have characteristic curve B, unless otherwise noted.

CAPACITORS
- MF : μF, PF : μμF

RESISTORS
- All resistors are in ohms
- F : nonflammable

COILS
- MMH : mH, UH : μH

SS-10A BOARD

Ref.No	Part No	Description				Remark
Q026	8-729-113-33	TRANSISTOR 2SB733				
Q027	8-729-178-54	TRANSISTOR 2SC2785				
Q028	8-729-178-54	TRANSISTOR 2SC2785				
Q029	8-729-178-54	TRANSISTOR 2SC2785				
Q030	8-729-117-54	TRANSISTOR 2SA1175				
Q301	8-729-178-54	TRANSISTOR 2SC2785				
Q302	8-729-177-32	TRANSISTOR 2SD773				
Q303	8-729-117-54	TRANSISTOR 2SA1175				
Q304	=>8-729-113-33	TRANSISTOR 2SB733-U2				
Q305	8-729-178-54	TRANSISTOR 2SC2785				
Q307	8-729-178-54	TRANSISTOR 2SC2785				
Q308	8-729-178-54	TRANSISTOR 2SC2785				
Q309	8-729-117-54	TRANSISTOR 2SA1175				
Q310	8-729-178-54	TRANSISTOR 2SC2785				
Q311	8-729-178-54	TRANSISTOR 2SC2785				
Q314	8-729-178-54	TRANSISTOR 2SC2785				
Q315	8-729-178-54	TRANSISTOR 2SC2785				
Q317	8-729-178-54	TRANSISTOR 2SC2785				
Q318	8-729-117-54	TRANSISTOR 2SA1175				
Q320	8-729-178-54	TRANSISTOR 2SC2785				
Q321	8-729-117-54	TRANSISTOR 2SA1175				
Q322	8-729-117-54	TRANSISTOR 2SA1175				
Q324	8-729-178-54	TRANSISTOR 2SC2785				
Q325	8-729-178-54	TRANSISTOR 2SC2785				
Q326	8-729-117-54	TRANSISTOR 2SA1175				
Q327	8-729-178-54	TRANSISTOR 2SC2785				
Q328	8-729-178-54	TRANSISTOR 2SC2785				
Q401	8-729-178-54	TRANSISTOR 2SC2785				
Q601	8-729-178-54	TRANSISTOR 2SC2785				
Q602	8-729-178-54	TRANSISTOR 2SC2785				
Q603	8-729-178-54	TRANSISTOR 2SC2785				
Q604	8-729-113-33	TRANSISTOR 2SB733				
Q605	8-729-178-54	TRANSISTOR 2SC2785				
Q606	8-729-178-54	TRANSISTOR 2SC2785				
Q607	8-729-178-54	TRANSISTOR 2SC2785				
Q613	8-729-178-54	TRANSISTOR 2SC2785				
Q614	8-729-178-54	TRANSISTOR 2SC2785				
Q615	8-729-178-54	TRANSISTOR 2SC2785				
Q616	8-729-178-54	TRANSISTOR 2SC2785				
Q617	8-729-178-54	TRANSISTOR 2SC2785				
Q618	8-729-178-54	TRANSISTOR 2SC2785				
Q620	8-729-178-54	TRANSISTOR 2SC2785				
Q621	8-729-178-54	TRANSISTOR 2SC2785				
Q624	8-729-117-54	TRANSISTOR 2SA1175				
Q625	8-729-117-54	TRANSISTOR 2SA1175				
Q626	8-729-117-54	TRANSISTOR 2SA1175				
Q640	8-729-178-54	TRANSISTOR 2SC2785				
		RESISTOR				
R011	1-246-803-00	CARBON	47K		1/8W	
R014	1-247-055-00	CARBON	300K		1/8W	
R017	1-246-803-00	CARBON	47K		1/8W	
R018	1-246-859-00	CARBON	20K		1/8W	

Ref.No	Part No	Description				Remark
R020	1-246-799-00	CARBON	22K		1/8W	
R021	1-246-803-00	CARBON	47K		1/8W	
R022	1-246-794-00	CARBON	8.2K		1/8W	
R023	1-246-785-00	CARBON	1.5K		1/8W	
R030	1-246-803-00	CARBON	47K		1/8W	
R031	1-246-791-00	CARBON	4.7K		1/8W	
R032	1-246-803-00	CARBON	47K		1/8W	
R035	1-246-803-00	CARBON	47K		1/8W	
R037	1-246-783-00	CARBON	1K		1/8W	
R038	1-246-799-00	CARBON	22K		1/8W	
R041	1-246-799-00	CARBON	22K		1/8W	
R042	1-246-799-00	CARBON	22K		1/8W	
R043	1-246-795-00	CARBON	10K		1/8W	
R044	1-246-803-00	CARBON	47K		1/8W	
R045	1-246-449-00	CARBON	100	5%	1/4W	
R046	1-246-457-00	CARBON	220	5%	1/4W	
R055	1-244-861-00	CARBON	330	5%	1/2W	
R056	1-246-783-00	CARBON	1K		1/8W	
R057⚠	1-217-612-00	WIREWOUND	0.1		2W	F
R058	1-246-801-00	CARBON	33K		1/8W	
R060	1-246-860-00	CARBON	24K		1/8W	
R064	1-247-049-00	CARBON	470K		1/8W	
R068	1-246-795-00	CARBON	10K		1/8W	
R071	1-247-057-00	CARBON	430K		1/8W	
R073	1-246-795-00	CARBON	10K		1/8W	
R080	1-246-783-00	CARBON	1K		1/8W	
R081	1-246-807-00	CARBON	100K		1/8W	
R082	1-247-049-00	CARBON	470K		1/8W	
R083	1-246-791-00	CARBON	4.7K		1/8W	
R084	1-246-791-00	CARBON	4.7K		1/8W	
R085	1-246-799-00	CARBON	22K		1/8W	
R089	1-246-795-00	CARBON	10K		1/8W	
R090	1-247-049-00	CARBON	470K		1/8W	
R091	1-246-807-00	CARBON	100K		1/8W	
R093	1-246-803-00	CARBON	47K		1/8W	
R094	1-246-795-00	CARBON	10K		1/8W	
R095	1-246-449-00	CARBON	100	5%	1/4W	
R096	1-246-457-00	CARBON	220	5%	1/4W	
R103	1-244-861-00	CARBON	330	5%	1/2W	
R106	1-246-783-00	CARBON	1K		1/8W	
R108	1-246-803-00	CARBON	47K		1/8W	
R110	1-246-811-00	CARBON	220K		1/8W	
R111	1-246-803-00	CARBON	47K		1/8W	
R113	1-246-803-00	CARBON	47K		1/8W	
R114	1-246-803-00	CARBON	47K		1/8W	
R115	1-246-801-00	CARBON	33K		1/8W	
R116	1-246-847-00	CARBON	2K		1/8W	
R117	1-246-799-00	CARBON	22K		1/8W	
R118	1-246-799-00	CARBON	22K		1/8W	
R301	1-246-799-00	CARBON	22K		1/8W	
R302	1-246-793-00	CARBON	6.8K		1/8W	
R303	1-246-797-00	CARBON	15K		1/8W	
R304	1-246-795-00	CARBON	10K		1/8W	

NOTE:

The components identified by shading and mark ⚠ are critical for safety.
Replace only with part number specified.

Les composants identifiés par une trame et une marque ⚠ sont critiques pour la sécurité. Ne les remplacer que par une pièce portant le numéro spécifié.

When indicating parts by reference number, please include the board name.

- =>: Due to standardization, interchangeable replacements may be substituted for parts specified in the diagrams.
- Items marked " ♦ " are not stocked since they are seldom required for routine service. Some delay should be anticipated when ordering these items.

- All variable and adjustable resistors have characteristic curve B, unless otherwise noted.

CAPACITORS
- MF : μF, PF : μμF

RESISTORS
- All resistors are in ohms
- F : nonflammable

COILS
- MMH : mH, UH : μH

Ref.No	Part No	Description				Remark
R310	1-246-795-00	CARBON	10K		1/8W	
R311	1-246-795-00	CARBON	10K		1/8W	
R315	1-246-791-00	CARBON	4.7K		1/8W	
R316	1-246-805-00	CARBON	68K		1/8W	
R317	1-246-803-00	CARBON	47K		1/8W	
R318	1-246-852-00	CARBON	5.1K		1/8W	
R321	1-246-783-00	CARBON	1K		1/8W	
R322 ⚠.	1-212-356-00	METAL	0.47	5%	1W	F
R323	1-246-799-00	CARBON	22K		1/8W	
R327	1-246-797-00	CARBON	15K		1/8W	
R330	1-246-788-00	CARBON	2.7K		1/8W	
R331	1-246-809-00	CARBON	150K		1/8W	
R334	1-246-801-00	CARBON	33K		1/8W	
R337	1-246-801-00	CARBON	33K		1/8W	
R338	1-246-809-00	CARBON	150K		1/8W	
R339	1-246-810-00	CARBON	180K		1/8W	
R340	1-246-788-00	CARBON	2.7K		1/8W	
R342	1-246-801-00	CARBON	33K		1/8W	
R344	1-246-801-00	CARBON	33K		1/8W	
R345	1-246-801-00	CARBON	33K		1/8W	
R346	1-246-807-00	CARBON	100K		1/8W	
R347	1-246-806-00	CARBON	82K		1/8W	
R348	1-246-801-00	CARBON	33K		1/8W	
R353	1-246-769-00	CARBON	68		1/8W	
R354	1-246-795-00	CARBON	10K		1/8W	
R355	1-246-795-00	CARBON	10K		1/8W	
R358	1-246-795-00	CARBON	10K		1/8W	
R363	1-246-809-00	CARBON	150K		1/8W	
R364	1-246-801-00	CARBON	33K		1/8W	
R365	1-246-866-00	CARBON	75K		1/8W	
R366	1-246-859-00	CARBON	20K		1/8W	
R367	1-246-799-00	CARBON	22K		1/8W	
R368	1-246-804-00	CARBON	56K		1/8W	
R369	1-246-800-00	CARBON	27K		1/8W	
R370	1-246-802-00	CARBON	39K		1/8W	
R371	1-246-795-00	CARBON	10K		1/8W	
R373	1-246-783-00	CARBON	1K		1/8W	
R374	1-246-804-00	CARBON	56K		1/8W	
R375	1-246-795-00	CARBON	10K		1/8W	
R376	1-246-795-00	CARBON	10K		1/8W	
R377	1-246-795-00	CARBON	10K		1/8W	
R378	1-246-799-00	CARBON	22K		1/8W	
R381	1-246-783-00	CARBON	1K		1/8W	
R382	1-246-795-00	CARBON	10K		1/8W	
R383	1-246-803-00	CARBON	47K		1/8W	
R387	1-246-795-00	CARBON	10K		1/8W	
R390	1-246-851-00	CARBON	4.3K		1/8W	
R391	1-246-803-00	CARBON	47K		1/8W	
R392	1-246-799-00	CARBON	22K		1/8W	
R393	1-246-799-00	CARBON	22K		1/8W	
R394	1-246-795-00	CARBON	10K		1/8W	
R396	1-246-810-00	CARBON	180K		1/8W	
R397	1-246-801-00	CARBON	33K		1/8W	

Ref.No	Part No	Description				Remark
R399	1-246-837-00	CARBON	300		1/8W	
R400	1-246-798-00	CARBON	18K		1/8W	
R401	1-246-779-00	CARBON	470		1/8W	
R404	1-246-801-00	CARBON	33K		1/8W	
R407	1-246-803-00	CARBON	47K		1/8W	
R411	1-246-803-00	CARBON	47K		1/8W	
R412	1-246-795-00	CARBON	10K		1/8W	
R414	1-246-783-00	CARBON	1K		1/8W	
R415	1-246-803-00	CARBON	47K		1/8W	
R415	1-246-799-00	CARBON	22K		1/8W	
R451	1-247-047-00	CARBON	330K		1/8W	
R452	1-246-797-00	CARBON	15K		1/8W	
R453	1-247-054-00	CARBON	240K		1/8W	
R460	1-246-795-00	CARBON	10K		1/8W	
R468	1-246-791-00	CARBON	4.7K		1/8W	
R473	1-246-803-00	CARBON	47K		1/8W	
R474	1-246-787-00	CARBON	2.2K		1/8W	
R479	1-246-807-00	CARBON	100K		1/8W	
R480	1-246-805-00	CARBON	68K		1/8W	
R481	1-246-805-00	CARBON	68K		1/8W	
R482	1-246-805-D0	CARBON	68K		1/8W	
R483	1-246-801-00	CARBON	33K		1/8W	
R484	1-246-791-00	CARBON	4.7K		1/8W	
R487	1-246-795-00	CARBON	10K		1/8W	
R488	1-246-800-00	CARBON	27K		1/8W	
R489	1-246-845-00	CARBON	1.3K		1/8W	
R490	1-246-845-00	CARBON	1.3K		1/8W	
R491	1-246-845-00	CARBON	1.3K		1/8W	
R492	1-246-797-00	CARBON	15K		1/8W	
R495	1-246-444-00	CARBON	62	5%	1/4W	
R496	1-246-779-00	CARBON	470		1/8W	
R498	1-246-803-00	CARBON	47K		1/8W	
R499	1-246-791-00	CARBON	4.7K		1/8W	
R501	1-246-850-00	CARBON	3.6K		1/8W	
R502	1-246-852-00	CARBON	5.1K		1/8W	
R503	1-246-759-00	CARBON	10		1/8W	
R601	1-246-799-00	CARBON	22K		1/8W	
R602	1-246-807-00	CARBON	100K		1/8W	
R603	1-246-799-00	CARBON	22K		1/8W	
R605	1-246-807-00	CARBON	100K		1/8W	
R606	1-246-803-00	CARBON	47K		1/8W	
R607	1-246-791-00	CARBON	4.7K		1/8W	
R608	1-246-807-00	CARBON	100K		1/8W	
R609	1-246-469-00	CARBON	680	5%	1/4W	
R610	1-246-803-00	CARBON	47K		1/8W	
R511	1-246-807-00	CARBON	100K		1/8W	
R612	1-246-807-00	CARBON	100K		1/8W	
R613	1-246-803-00	CARBON	47K		1/8W	
R615	1-246-783-00	CARBON	1K		1/8W	
R616	1-246-859-00	CARBON	20K		1/8W	
R617	1-246-795-00	CARBON	10K		1/8W	
R618	1-246-791-00	CARBON	4.7K		1/8W	
R627	1-246-791-00	CARBON	4.7K		1/8W	

NOTE:

The components identified by shading and mark ⚠ are critical for safety. Replace only with part number specified.

Les composants identifiés par une trame et une marque ⚠ sont critiques pour la sécurité. Ne les remplacer que par une pièce portant le numéro spécifié.

When indicating parts by reference number, please include the board name.

- =>: Due to standardization, interchangeable replacements may be substituted for parts specified in the diagrams.
- Items marked " ♠ " are not stocked since they are seldom required for routine service. Some delay should be anticipated when ordering these items.

- All variable and adjustable resistors have characteristic curve B, unless otherwise noted.

CAPACITORS
- MF : μF, PF : μμF

RESISTORS
- All resistors are in ohms
- F : nonflammable

COILS
- MMH : mH, UH : μH

SS-10A BOARD

FU-3 BOARD

Ref.No	Part No	Description			Remark
R628	1-246-791-00	CARBON	4.7K	1/8W	
R629	1-246-791-00	CARBON	4.7K	1/8W	
R630	1-246-791-00	CARBON	4.7K	1/8W	
R631	1-246-791-00	CARBON	4.7K	1/8W	
R632	1-246-791-00	CARBON	4.7K	1/8W	
R633	1-246-801-00	CARBON	33K	1/8W	
R633	1-246-803-00	CARBON	47K	1/8W	
R634	1-246-803-00	CARBON	47K	1/8W	
R635	1-246-803-00	CARBON	47K	1/8W	
R640	1-247-049-00	CARBON	470K	1/8W	
R645	1-246-795-00	CARBON	10K	1/8W	
R648	1-246-791-00	CARBON	4.7K	1/8W	
R649	1-246-791-00	CARBON	4.7K	1/8W	
R650	1-246-791-00	CARBON	4.7K	1/8W	
R660	1-246-803-00	CARBON	47K	1/8W	
R690	1-246-783-00	CARBON	1K	1/8W	
R691	1-246-803-00	CARBON	47K	1/8W	
R693	1-246-783-00	CARBON	1K	1/8W	
R694	1-246-795-00	CARBON	10K	1/8W	
R695	1-246-795-00	CARBON	10K	1/8W	
R699	1-246-807-00	CARBON	100K	1/8W	
R703	1-246-751-00	CARBON	2.2	1/8W	
		VARIABLE RESISTOR			
RV001	1-226-774-00	RES, ADJ, METAL GLAZE 47K			
RV002	1-226-773-00	RES, ADJ, METAL GLAZE 22K			
RV301	1-226-753-00	RES, ADJ, SOLID 47K			
RV302	1-224-254-XX	RES, ADJ, METAL GLAZE 47K			
RV303	1-226-771-00	RES, ADJ, METAL GLAZE 1K			
RV304	1-226-753-00	RES, ADJ, SOLID 47K			
RV305	1-226-753-00	RES, ADJ, SOLID 47K			
RV306	1-226-774-00	RES, ADJ, METAL GLAZE 47K			
RV307	1-226-703-00	RES, ADJ, METAL GLAZE 10K			
RV308	1-226-703-00	RES, ADJ, METAL GLAZE 10K			
RV309	1-226-703-00	RES, ADJ, METAL GLAZE 10K			
RV310	1-226-703-00	RES, ADJ, METAL GLAZE 10K			
RV314	1-226-753-00	RES, ADJ, SOLID 47K			
RV315	1-226-701-00	RES, ADJ, METAL GLAZE 220			
RV316	1-226-701-00	RES, ADJ, METAL GLAZE 220			
RV317	1-226-753-00	RES, ADJ, SOLID 47K			
		THERMISTOR			
TH001	1-800-200-00	THERMISTOR S-3K			
TH301	1-800-200-00	THERMISTOR S-3K			
		CRYSTAL			
X601	1-527-726-00	VIBRATOR, CRYSTAL			

Ref.No	Part No	Description				Remark
	♠:A-6717-225-A	FU-3 BOARD, COMPLETE ********************				
	♠:3-670-094-02	HOLDER, LED, 6 GANG				
	♠:3-670-095-00	HOLDER, LED				
	♠:3-674-312-00	COVER, 3 GANG LED				
	♠:3-674-313-00	COVER, LED				
	♠:3-674-314-00	PROTECTOR (A)				
	♠:3-674-315-00	PROTECTOR (B)				
	♠:3-674-316-00	RETAINER, HARNESS				
		CAPACITOR				
C001	1-161-013-00	CERAMIC	0.01MF	10%	25V	
C002	1-123-617-00	ELECT	10MF	20%	16V	
C003	1-161-321-00	CERAMIC	680PF	10%	50V	
		DIODE				
D001	8-719-812-30	DIODE TL0123				
D002	8-719-914-02	DIODE BR3402S				
D003	8-719-914-33	DIODE PG3432SY				
D004	8-719-812-32	DIODE TLY123				
D005	8-719-812-32	DIODE TLY123				
D006	8-719-812-32	DIODE TLY123				
D008	8-719-914-02	DIODE BR3402S				
D009	8-719-932-22	DIODE GL-9NG922B				
D010	8-719-932-22	DIODE GL-9NG922B				
D011	8-719-932-22	DIODE GL-9NG922B				
D012	8-719-932-22	DIODE GL-9NG922B				
D013	8-719-932-22	DIODE GL-9NG922B				
D014	8-719-932-22	DIODE GL-9NG922B				
D015	8-719-914-33	DIODE PG3432SY				
D016	8-719-914-33	DIODE PG3432SY				
D017	8-719-914-33	DIODE PG3432SY				
D018	8-719-914-33	DIODE PG3432SY				
D019	8-719-914-33	DIODE PG3432SY				
D020	8-719-914-33	DIODE PG3432SY				
D021	8-719-914-33	DIODE PG3432SY				
D022	8-719-914-33	DIODE PG3432SY				
D023	8-719-914-33	DIODE PG3432SY				
D024	8-719-812-32	DIODE TLY123				
D026	8-719-812-32	DIODE TLY123				
D027	8-719-812-32	DIODE TLY123				
D028	8-719-812-32	DIODE TLY123				
D029	8-719-911-06	DIODE 1SS106				
D030	8-719-911-06	DIODE 1SS106				
D031	8-719-911-06	DIODE 1SS106				
		IC				
IC001	8-759-987-58	IC MB8758				
		TRANSISTOR				
Q001	8-729-178-54	TRANSISTOR 2SC2785				
Q002	8-729-178-54	TRANSISTOR 2SC2785				

NOTE:

> The components identified by shading and mark ⚠ are critical for safety. Replace only with part number specified.
>
> Les composants identifiés par une trame et une marque ⚠ sont critiques pour la sécurité. Ne les remplacer que par une pièce portant le numéro spécifié.

When indicating parts by reference number, please include the board name.

- =>: Due to standardization, interchangeable replacements may be substituted for parts specified in the diagrams.
- Items marked "♠" are not stocked since they are seldom required for routine service. Some delay should be anticipated when ordering these items.
- All variable and adjustable resistors have characteristic curve B, unless otherwise noted.

CAPACITORS
- MF : μF, PF : μμF

RESISTORS
- All resistors are in ohms
- F : nonflammable

COILS
- MMH : mH, UH : μH

Ref.No	Part No	Description				Remark
Q003	8-729-178-54	TRANSISTOR 2SC2785				
Q004	8-729-178-54	TRANSISTOR 2SC2785				
Q005	8-729-178-54	TRANSISTOR 2SC2785				
Q006	8-729-178-54	TRANSISTOR 2SC2785				
Q007	8-729-178-54	TRANSISTOR 2SC2785				
Q008	8-729-178-54	TRANSISTOR 2SC2785				

RESISTOR

R001	1-246-776-00	CARBON	270	1/8W
R002	1-246-776-00	CARBON	270	1/8W
R003	1-246-773-00	CARBON	150	1/8W
R005	1-246-776-00	CARBON	270	1/8W
R006	1-246-795-00	CARBON	10K	1/8W
R007	1-246-795-00	CARBON	10K	1/8W
R008	1-246-795-00	CARBON	10K	1/8W
R015	1-246-773-00	CARBON	150	1/8W
R016	1-246-773-00	CARBON	150	1/8W
R018	1-246-776-00	CARBON	270	1/8W
R019	1-246-773-00	CARBON	150	1/8W
R020	1-246-773-00	CARBON	150	1/8W

SWITCH

S001	1-553-766-00	SWITCH, KEY BOARD
S002	1-553-766-00	SWITCH, KEY BOARD
S003	1-553-766-00	SWITCH, KEY BOARD
S004	1-553-766-00	SWITCH, KEY BOARD
S005	1-553-766-00	SWITCH, KEY BOARD
S006	1-553-766-00	SWITCH, KEY BOARD
S007	1-553-766-00	SWITCH, KEY BOARD
S008	1-553-766-00	SWITCH, KEY BOARD
S009	1-553-766-00	SWITCH, KEY BOARD
S010	1-553-766-00	SWITCH, KEY BOARD
S011	1-553-766-00	SWITCH, KEY BOARD
S012	1-553-766-00	SWITCH, KEY BOARD
S013	1-553-766-00	SWITCH, KEY BOARD
S014	1-553-766-00	SWITCH, KEY BOARD
S016	1-553-766-00	SWITCH, KEY BOARD
S017	1-553-766-00	SWITCH, KEY BOARD
S018	1-553-766-00	SWITCH, KEY BOARD
S019	1-553-766-00	SWITCH, KEY BOARD
S020	1-553-766-00	SWITCH, KEY BOARD
S021	1-553-766-00	SWITCH, KEY BOARD
S022	1-553-766-00	SWITCH, KEY BOARD
S023	1-553-766-00	SWITCH, KEY BOARD

****

♠:1-606-231-00 MB-3 BOARD
****

CAPACITOR

C329	1-161-057-00	CERAMIC	0.033MF	10%	50V
C802	1-123-611-00	ELECT	1MF	20%	50V

Ref.No	Part No	Description		Remark

DIODE

D319	8-719-911-19	DIODE 1SS119

TRANSISTOR

Q803	8-729-117-54	TRANSISTOR 2SA1175

RESISTOR

R395	1-246-804-00	CARBON	56K	1/8W
R805	1-246-807-00	CARBON	100K	1/8W

****

♠:A-6717-236-A RR-1A BOARD, COMPLETE
****

3-572-085-00	WASHER, FIBER
♠:3-670-059-00	BRACKET (RIGHT), RR
♠:3-670-060-00	BRACKET (LEFT), RR
♠:3-671-850-00	CASE, SHIELD, RR-1
3-701-822-00	HOLDER, WIRE

CAPACITOR

C001	1-123-613-00	ELECT	3.3MF	20%	50V
C002	1-161-021-00	CERAMIC	0.047MF	10%	25V
C003	1-102-973-00	CERAMIC	100PF	5%	50V
C101	1-161-021-00	CERAMIC	0.047MF	10%	25V
C103	1-102-111-00	CERAMIC	270PF	10%	50V
C104	1-102-824-00	CERAMIC	470PF	5%	50V
C201	1-161-021-00	CERAMIC	0.047MF	10%	25V
C202	1-102-824-00	CERAMIC	470PF	5%	50V
C203	1-102-111-00	CERAMIC	270PF	10%	50V
C205	1-123-617-00	ELECT	10MF	20%	16V
C206	1-123-821-00	ELECT	47MF	20%	16V
C207	1-161-039-00	CERAMIC	0.001MF	10%	25V
C208	1-161-039-00	CERAMIC	0.001MF	10%	25V
C209	1-102-112-00	CERAMIC	330PF	10%	50V
C301	1-123-839-00	ELECT	1000MF	20%	16V
C302	1-123-820-00	ELECT	33MF	20%	16V
C303	1-123-611-00	ELECT	1MF	20%	50V

CONNECTOR

CN101	♠:1-560-463-00	PIN, CONNECTOR 8P
CN102	♠:1-560-469-00	PIN, CONNECTOR 6P
CN103	♠:1-560-464-00	PIN, CONNECTOR 10P
CN201	♠:1-560-466-00	PIN, CONNECTOR 3P
CN202	♠:1-560-467-00	PIN, CONNECTOR 4P
CN203	♠:1-560-470-00	PIN, CONNECTOR 8P
CN301	♠:1-560-471-00	PIN, CONNECTOR 10P
CN302	♠:1-560-456-00	PIN, CONNECTOR 2P
CN303	♠:1-560-470-00	PIN, CONNECTOR 8P

DIODE

D001	8-719-911-19	DIODE 1SS119

NOTE:

The components identified by shading and mark ⚠ are critical for safety. Replace only with part number specified.

Les composants identifiés par une trame et une marque ⚠ sont critiques pour la sécurité. Ne les remplacer que par une pièce portant le numéro spécifié.

When indicating parts by reference number, please include the board name.

- =>: Due to standardization, interchangeable replacements may be substituted for parts specified in the diagrams.
- Items marked " ♠ " are not stocked since they are seldom required for routine service. Some delay should be anticipated when ordering these items.
- All variable and adjustable resistors have characteristic curve B, unless otherwise noted.

CAPACITORS
- MF : μF, PF : μμF

RESISTORS
- All resistors are in ohms
- F : nonflammable

COILS
- MMH : mH, UH : μH

RR-1A BOARD

Ref.No	Part No	Description	Remark
D102	8-719-911-19	DIODE 1SS119	
D201	8-719-100-30	DIODE RD5.1E-B2	
D301	8-719-911-19	DIODE 1SS119	
D302	8-719-911-19	DIODE 1SS119	
D305	8-719-200-02	DIODE 10E-2	
D306	8-719-200-02	DIODE 10E-2	
D307	8-719-200-02	DIODE 10E-2	
D308	8-719-200-02	DIODE 10E-2	
D309	8-719-200-02	DIODE 10E-2	
D310	8-719-200-02	DIODE 10E-2	
D311	8-719-200-02	DIODE 10E-2	
D312	8-719-200-02	DIODE 10E-2	
D313	8-719-200-02	DIODE 10E-2	
D314	8-719-200-02	DIODE 10E-2	
D315	8-719-200-02	DIODE 10E-2	
D316	8-719-200-02	DIODE 10E-2	
D317	8-719-911-19	DIODE 1SS119	
D318	8-719-911-19	DIODE 1SS119	
D319	8-719-200-02	DIODE 10E-2	
		IC	
IC001	8-759-103-93	IC UPC393C	
IC101	8-759-115-18	IC UPD651G-518	
IC201	8-759-115-17	IC UPD651G-517	
		TRANSISTOR	
Q101	8-729-178-54	TRANSISTOR 2SC2785	
Q102	8-729-178-54	TRANSISTOR 2SC2785	
Q103	8-729-178-54	TRANSISTOR 2SC2785	
Q104	8-729-178-54	TRANSISTOR 2SC2785	
Q105	8-729-178-54	TRANSISTOR 2SC2785	
Q106	8-729-178-54	TRANSISTOR 2SC2785	
Q108	8-729-178-54	TRANSISTOR 2SC2785	
Q203	8-729-178-54	TRANSISTOR 2SC2785	
Q204	8-729-178-54	TRANSISTOR 2SC2785	
Q301	8-729-177-32	TRANSISTOR 2SD773	
Q302	8-729-177-32	TRANSISTOR 2SD773	
Q303	8-729-113-32	TRANSISTOR 2SB733	
Q304	8-729-113-32	TRANSISTOR 2SB733	
Q305	8-729-177-32	TRANSISTOR 2S0773	
Q306	8-729-177-32	TRANSISTOR 2SD773	
Q307	8-729-113-32	TRANSISTOR 2S8733	
Q308	8-729-113-32	TRANSISTOR 2SB733	
Q309	8-729-116-42	TRANSISTOR 2SD1164	
Q310	8-729-116-42	TRANSISTOR 2SD1164	
Q311	8-729-116-42	TRANSISTOR 2SD1164	
Q312	8-729-116-42	TRANSISTOR 2SD1164	
Q313	8-729-178-54	TRANSISTOR 2SC2785	
Q314	8-729-178-54	TRANSISTOR 2SC2785	
Q315	8-729-178-54	TRANSISTOR 2SC2785	
Q316	8-729-178-54	TRANSISTOR 2SC2785	
Q332	8-729-117-54	TRANSISTOR 2SA1175	

Ref.No	Part No	Description			Remark
		RESISTOR			
R001	1-246-799-00	CAR8ON	22K	1/8W	
R002	1-246-807-00	CARBON	100K	1/8W	
R003	1-246-795-00	CARBON	10K	1/8W	
R004	1-246-788-00	CARBON	2.7K	1/8W	
R005	1-246-795-00	CARBON	10K	1/8W	
R006	1-246-805-00	CARBON	68K	1/8W	
R101	1-246-854-00	CARBON	7.5K	1/8W	
R102	1-246-854-00	CARBON	7.5K	1/8W	
R103	1-246-854-00	CARBON	7.5K	1/8W	
R104	1-246-854-00	CARBON	7.5K	1/8W	
R105	1-246-854-00	CARBON	7.5K	1/8W	
R106	1-246-854-00	CARBON	7.5K	1/8W	
R114	1-247-049-00	CARBON	470K	1/8W	
R115	1-246-795-00	CARBON	10K	1/8W	
R118	1-246-795-00	CARBON	10K	1/8W	
R119	1-246-807-00	CARBON	100K	1/8W	
R120	1-246-807-00	CARBON	100K	1/8W	
R130	1-246-773-00	CARBON	150	1/8W	
R131	1-246-773-00	CARBON	150	1/8W	
R132	1-246-773-00	CARBON	150	1/8W	
R133	1-246-773-00	CARBON	150	1/8W	
R134	1-246-773-00	CARBON	150	1/8W	
R135	1-246-773-00	CARBON	150	1/8W	
R201	1-246-781-00	CARBON	680	1/8W	
R203	1-246-805-00	CARBON	68K	1/8W	
R204	1-246-795-00	CARBON	10K	1/8W	
R205	1-247-049-00	CARBON	470K	1/8W	
R208	1-246-799-00	CARBON	22K	1/8W	
R209	1-246-795-00	CARBON	10K	1/8W	
R211	1-246-795-00	CARBON	10K	1/8W	
R212	1-246-795-00	CARBON	10K	1/8W	
R213	1-246-795-00	CARBON	10K	1/8W	
R214	1-246-795-00	CARBON	10K	1/8W	
R215	1-246-795-00	CARBON	10K	1/8W	
R216	1-246-795-00	CARBON	10K	1/8W	
R217	1-246-795-00	CARBON	10K	1/8W	
R218	1-246-807-00	CARBON	100K	1/8W	
R219	1-246-795-00	CARBON	10K	1/8W	
R220	1-246-795-00	CARBON	10K	1/8W	
R223	1-246-795-00	CARBON	10K	1/8W	
R224	1-246-795-00	CARBON	10K	1/8W	
R225	1-246-807-00	CARBON	100K	1/8W	
R226	1-246-795-00	CARBON	10K	1/8W	
R227	1-246-789-00	CARBON	3.3K	1/8W	
R228	1-246-780-00	CARBON	560	1/8W	
R229	1-246-795-00	CARBON	10K	1/8W	
R230	1-246-783-00	CARBON	1K	1/8W	
R231	1-246-783-00	CARBON	1K	1/8W	
R232	1-246-807-00	CARBON	100K	1/8W	
R234	1-246-795-00	CARBON	10K	1/8W	
R235	1-246-776-00	CARBON	270	1/8W	

NOTE:

The components identified by shading and mark ⚠ are critical for safety.
Replace only with part number specified.

Les composants identifiés par une trame et une marque ⚠ sont critiques pour la sécurité. Ne les remplacer que par une pièce portant le numéro spécifié.

When indicating parts by reference number, please include the board name.

- =>: Due to standardization, interchangeable replacements may be substituted for parts specified in the diagrams.
- Items marked "♠" are not stocked since they are seldom required for routine service. Some delay should be anticipated when ordering these items.

- All variable and adjustable resistors have characteristic curve B, unless otherwise noted.

CAPACITORS
- MF : μF, PF : μμF

RESISTORS
- All resistors are in ohms
- F : nonflammable

COILS
- MMH : mH, UH : μH

Ref.No	Part No	Description				Remark
R236	1-246-803-00	CARBON	47K		1/8W	
R240	1-246-787-00	CARBON	2.2K		1/8W	
R301	1-246-783-00	CARBON	1K		1/8W	
R302	1-246-783-00	CARBON	1K		1/8W	
R303	1-246-789-00	CARBON	3.3K		1/8W	
R304	1-246-789-00	CARBON	3.3K		1/8W	
R305	1-246-843-00	CARBON	910		1/8W	
R306	1-246-843-00	CARBON	910		1/8W	
R307	1-246-783-00	CARBON	1K		1/8W	
R308	1-246-783-00	CARBON	1K		1/8W	
R309	1-246-789-00	CARBON	3.3K		1/8W	
R310	1-246-789-00	CARBON	3.3K		1/8W	
R311	1-246-843-00	CARBON	910		1/8W	
R312	1-246-843-00	CARBON	910		1/8W	
R313	1-246-783-00	CARBON	1K		1/8W	
R314	1-246-783-00	CARBON	1K		1/8W	
R315	1-246-783-00	CARBON	1K		1/8W	
R316	1-246-783-00	CARBON	1K		1/8W	
R317	1-246-789-00	CARBON	3.3K		1/8W	
R320	1-246-787-00	CARBON	2.2K		1/8W	
R321	1-246-807-00	CARBON	100K		1/8W	
R322	1-246-807-00	CARBON	100K		1/8W	
R323	1-246-787-00	CARBON	2.2K		1/8W	
R324	1-246-787-00	CARBON	2.2K		1/8W	
R325	1-246-807-00	CARBON	100K		1/8W	
R326	1-246-807-00	CARBON	100K		1/8W	
R327	1-246-787-00	CARBON	2.2K		1/8W	
R328	1-246-793-00	CARBON	6.8K		1/8W	
R329	1-246-791-00	CARBON	4.7K		1/8W	
R330	1-246-791-00	CARBON	4.7K		1/8W	
R331	1-246-791-00	CARBON	4.7K		1/8W	
R332	1-246-797-00	CARBON	15K		1/8W	
R333 ⚠	1-247-587-00	CARBON	0.47	5%	1/4W	
R334	1-246-795-00	CARBON	10K		1/8W	
R335	1-206-640-00	METAL	100	5%	2W	F
R336	1-206-640-00	METAL	100	5%	2W	F
R337	1-246-794-00	CARBON	8.2K		1/8W	

CRYSTAL

X101	1-527-532-31	OSCILLATOR, CERAMIC
X201	1-527-532-31	OSCILLATOR, CERAMIC

****

♠:1-605-575-00 TU-22 BOARD
****

****

♠:A-6721-086-A TU-21 BOARD, COMPLETE
****

	Part No	Description
	♠:1-555-716-00	CABLE, PIN
	1-555-798-00	CORD (WITH DC PLUG)
	♠:3-671-841-00	CASE (1) (MAIN), SHIELD, TU
	♠:3-671-842-00	LID, CASE (1), SHIELD, TU
	♠:3-671-843-00	LID, REAR, CASE (1), SHIELD, TU
	♠:3-671-844-00	CASE (2) (MAIN), SHIELD, TU
	♠:3-671-845-00	LID, CASE (2), SHIELD, TU
	♠:3-671-846-00	LID, REAR, CASE (2), SHIELD, TU
	♠:3-671-847-00	CASE (3) (MAIN), SHIELD, TU
	♠:3-671-848-00	LID, CASE (3), SHIELD, TU
	♠:3-671-849-00	LID, REAR, CASE (3), SHIELD, TU

BATTERY

BT491	1-528-074-00	BATTERY, NICKEL CADMIUM

CAPACITOR

Ref.No	Part No	Description				Remark
C064	1-123-330-00	ELECT	22MF	20%	16V	
C101	1-102-074-00	CERAMIC	0.001MF	10%	50V	
C102	1-123-380-00	ELECT	1MF	20%	50V	
C103	1-102-121-00	CERAMIC	0.0022MF	10%	50V	
C104	1-102-074-00	CERAMIC	0.001MF	10%	50V	
C105	1-102-513-00	CERAMIC	18PF	5%	50V	
C106	1-102-074-00	CERAMIC	0.001MF	10%	50V	
C107	1-123-330-00	ELECT	22MF	20%	16V	
C108	1-123-333-00	ELECT	100MF	20%	16V	
C109	1-108-242-00	MYLAR	0.022MF	10%	50V	
C110	1-131-404-00	ELECT(SOLID)	0.22MF	10%	25V	
C111	1-131-404-00	ELECT(SOLID)	0.22MF	10%	25V	
C112	1-102-526-00	CERAMIC	75PF	5%	50V	
C113	1-101-004-00	CERAMIC	0.01MF		50V	
C114	1-101-884-00	CERAMIC	56PF	5%	50V	
C115	1-101-884-00	CERAMIC	56PF	5%	50V	
C116	1-102-121-00	CERAMIC	0.0022MF	10%	50V	
C117	1-102-953-00	CERAMIC	18PF	5%	50V	
C119	1-123-333-00	ELECT	100MF	20%	16V	
C120	1-123-330-00	ELECT	22MF	20%	16V	
C121	1-108-567-00	MYLAR	0.0033MF	5%	50V	
C122	1-123-328-00	ELECT	4.7MF	20%	25V	
C123	1-123-330-00	ELECT	22MF	20%	16V	
C124	1-102-960-00	CERAMIC	24PF	5%	50V	
C125	1-102-971-00	CERAMIC	82PF	5%	50V	
C126	1-161-059-00	CERAMIC	0.047MF	10%	50V	
C127	1-102-526-00	CERAMIC	75PF	5%	50V	
C128	1-123-330-00	ELECT	22MF	20%	16V	
C129	1-123-380-00	ELECT	1MF	20%	50V	
C130	1-108-583-00	MYLAR	0.015MF	5%	50V	
C131	1-123-379-00	ELECT	0.47MF	20%	50V	
C132	1-102-074-00	CERAMIC	0.001MF	10%	50V	
C151	1-123-839-00	ELECT	1000MF	20%	16V	
C152	1-123-330-00	ELECT	22MF	20%	16V	
C153	1-123-330-00	ELECT	22MF	20%	16V	
C155	1-130-495-00	MYLAR	0.1MF	5%	50V	
C156	1-123-330-00	ELECT	22MF	20%	16V	
C157	1-123-330-00	ELECT	22MF	20%	16V	
C201	1-101-004-00	CERAMIC	0.01MF		50V	
C202	1-123-330-00	ELECT	22MF	20%	16V	

NOTE:

The components identified by shading and mark ⚠ are critical for safety.
Replace only with part number specified.

Les composants identifiés par une trame et une marque ⚠ sont critiques pour la sécurité.
Ne les remplacer que par une pièce portant le numéro spécifié.

When indicating parts by reference number, please include the board name.

- =>: Due to standardization, interchangeable replacements may be substituted for parts specified in the diagrams.
- Items marked "♠" are not stocked since they are seldom required for routine service. Some delay should be anticipated when ordering these items.

- All variable and adjustable resistors have characteristic curve B, unless otherwise noted.

CAPACITORS
- MF : μF, PF : μμF

RESISTORS
- All resistors are in ohms
- F : nonflammable

COILS
- MMH : mH, UH : μH

TU-21 BOARD

Ref.No	Part No	Description			Remark
C203	1-161-059-00	CERAMIC 0.047MF	10%		50V
C204	1-123-379-00	ELECT 0.47MF	20%		50V
C205	1-102-973-00	CERAMIC 100PF	5%		50V
C206	1-108-555-00	MYLAR 0.001MF	5%		50V
C207	1-108-555-00	MYLAR 0.001MF	5%		50V
C208	1-108-559-00	MYLAR 0.0015MF	5%		50V
C209	1-123-381-00	ELECT 2.2MF	20%		50V
C210	1-102-973-00	CERAMIC 100PF	5%		50V
C211	1-102-959-00	CERAMIC 22PF	5%		50V
C212	1-130-499-51	MYLAR 0.22MF	5%		50V
C214	1-130-489-51	MYLAR 0.033MF	5%		50V
C217	1-130-483-51	MYLAR 0.01MF	5%		50V
C219	1-123-321-00	ELECT 220MF	20%		16V
C221	1-102-973-00	CERAMIC 100PF	5%		50V
C421	1-101-004-00	CERAMIC 0.01MF			50V
C422	1-123-252-00	ELECT 1MF			160V
C423	1-123-383-00	ELECT 4.7MF	20%		100V
C424	1-123-369-00	ELECT 4.7MF	20%		50V
C425	1-106-367-00	MYLAR 0.01MF	5%		200V
C426	1-123-622-00	ELECT 22MF	20%		16V
C427	1-161-059-00	CERAMIC 0.047MF	10%		50V
C428	1-161-059-00	CERAMIC 0.047MF	10%		50V
C429	1-123-622-00	ELECT 22MF	20%		16V

FILTER

CF101	1-409-332-00	CERAMIC TRAP (4.5MHZ)
CF102	1-527-260-00	FILTER, CERAMIC (4.5MHZ)
CF103	1-409-332-00	CERAMIC TRAP (4.5MHZ)

CONNECTOR

CN001●:	1-560-469-00	PIN, CONNECTOR 6P
CN002●:	1-560-468-00	PIN, CONNECTOR 5P
CN004●:	1-560-467-00	PIN, CONNECTOR 4P
CN005●:	1-560-470-00	PIN, CONNECTOR 8P
CN006●:	1-560-467-00	PIN, CONNECTOR 4P
CN007●:	1-560-467-00	PIN, CONNECTOR 4P
CN008●:	1-560-467-00	PIN, CONNECTOR 4P
CN009●:	1-560-472-00	PIN, CONNECTOR 12P
CN010●:	1-560-468-00	PIN, CONNECTOR 5P
CN012●:	1-560-470-00	PIN, CONNECTOR 8P
CN013●:	1-560-468-00	PIN, CONNECTOR 5P

COMPOSITION CIRCUIT BLOCK

CP201	1-232-154-00	COMPOSITION CIRCUIT BLOCK
CP501	1-232-160-00	COMPOSITION CIRCUIT BLOCK
CP502	1-232-160-00	COMPOSITION CIRCUIT BLOCK
CP503	1-232-161-00	COMPOSITION CIRCUIT BLOCK

DIODE

Ref.No	Part No	Description	Remark
D101	8-719-911-19	DIODE 1SS119	
D102	8-719-911-19	DIODE 1SS119	
D103	8-719-911-19	DIODE 1SS119	
D201	8-719-911-19	DIODE 1SS119	
D202	8-719-911-19	DIODE 1SS119	
D203	8-719-911-19	DIODE 1SS119	
D204	8-719-911-19	DIODE 1SS119	
D205	8-719-911-19	DIODE 1SS119	
D206	8-719-911-19	DIODE 1SS119	
D207	8-719-911-19	DIODE 1SS119	
D210	8-719-911-19	DIODE 1SS119	
D211	8-719-911-19	DIODE 1SS119	
D212	8-719-911-19	DIODE 1SS119	
D213	8-719-911-19	DIODE 1SS119	
D214	8-719-911-19	DIODE 1SS119	
D215	8-719-911-19	DIODE 1SS119	
D421	=>8-719-305-15	DIODE GH-3F	
D422	8-719-305-15	DIODE GH-3F	
D423	8-719-305-15	DIODE GH-3F	
D424	8-719-124-07	DIODE RD24E-B	
D425	8-719-911-19	DIODE 1SS119	
D426	8-719-911-19	DIODE 1SS119	
D501	8-719-911-19	DIODE 1SS119	
D502	8-719-911-19	DIODE 1SS119	
D503	8-719-911-19	DIODE 1SS119	
D504	8-719-911-19	DIODE 1SS119	
D505	8-719-911-19	DIODE 1SS119	
D506	8-719-911-19	DIODE 1SS119	
D507	8-719-911-19	DIODE 1SS119	
D508	8-719-911-19	DIODE 1SS119	
D509	8-719-911-19	DIODE 1SS119	
D510	8-719-911-19	DIODE 1SS119	
D511	8-719-911-19	DIODE 1SS119	
D512	8-719-911-19	DIODE 1SS119	
D513	8-719-911-19	DIODE 1SS119	
D514	8-719-911-19	DIODE 1SS119	

IC

IC101	8-758-851-00	IC CX-885A
IC201	=>8-757-605-00	IC CX-760E
IC202	8-757-611-00	IC CX-761A
IC203	8-758-040-00	IC CX-804
IC204	8-759-157-40	IC UPC574J
IC501	8-759-240-71	IC TC4071BP
IC502	8-759-240-71	IC TC4071BP

COIL

L101	1-408-408-00	MICRO INDUCTOR 8.2UH
L102	1-408-411-00	MICRO INDUCTOR 15UH
L103	1-408-399-00	MICRO INDUCTOR 1.5UH
L104	1-408-403-00	MICRO INDUCTOR 3.3UH
L105	1-408-414-00	MICRO INDUCTOR 27UH
L106	1-408-420-00	MICRO INDUCTOR 82UH
L108	1-408-410-00	MICRO INDUCTOR 12UH
L109	1-407-510-00	MICRO INDUCTOR 33MMH
L110	1-408-421-00	MICRO INDUCTOR 100UH
L201	1-408-421-00	MICRO INDUCTOR 100UH

NOTE:

The components identified by shading and mark ⚠ are critical for safety.
Replace only with part number specified.

Les composants identifiés par une trame et une marque ⚠ sont critiques pour la sécurité.
Ne les remplacer que par une pièce portant le numéro spécifié.

When indicating parts by reference number, please include the board name.

- =>: Due to standardization, interchangeable replacements may be substituted for parts specified in the diagrams.
- Items marked " ● " are not stocked since they are seldom required for routine service. Some delay should be anticipated when ordering these items.

- All variable and adjustable resistors have characteristic curve B, unless otherwise noted.

CAPACITORS
- MF : μF, PF : μμF

RESISTORS
- All resistors are in ohms
- F : nonflammable

COILS
- MMH : mH, UH : μH

TU-21 BOARD

Ref.No	Part No	Description	Remark
L421	1-408-421-00	MICRO INOUCTOR 100UH	

CONNECTOR

Ref.No	Part No	Description	Remark
PJ101♠:	1-526-575-00	SOCKET, PLUG	
PJ102♠:	1-526-575-00	SOCKET, PLUG	

TRANSISTOR

Ref.No	Part No	Description	Remark
Q053	8-729-178-54	TRANSISTOR 2SC2785	
Q101	8-729-178-54	TRANSISTOR 2SC2785	
Q103	8-729-178-54	TRANSISTOR 2SC2785	
Q104	8-729-178-54	TRANSISTOR 2SC2785	
Q105	8-729-117-54	TRANSISTOR 2SA1175	
Q106	8-729-117-54	TRANSISTOR 2SA1175	
Q151	8-729-178-54	TRANSISTOR 2SC2785	
Q201	8-729-178-54	TRANSISTOR 2SC2785	
Q202	8-729-178-54	TRANSISTOR 2SC2785	
Q203	8-729-178-54	TRANSISTOR 2SC2785	
Q204	8-729-178-54	TRANSISTOR 2SC2785	
Q205	8-729-178-54	TRANSISTOR 2SC2785	
Q206	8-729-178-54	TRANSISTOR 2SC2785	
Q207	8-729-178-54	TRANSISTOR 2SC2785	
Q208	8-729-139-04	TRANSISTOR 2N3904	
Q209	8-724-375-01	TRANSISTOR 2SC403C	
Q213	8-729-117-54	TRANSISTOR 2SA1175	
Q214	8-729-117-54	TRANSISTOR 2SA1175	
Q215	8-729-117-54	TRANSISTOR 2SA1175	
Q216	8-729-178-54	TRANSISTOR 2SC2785	
Q401	8-729-178-54	TRANSISTOR 2SC2785	
Q402	8-729-117-54	TRANSISTOR 2SA1175	
Q403	8-729-178-54	TRANSISTOR 2SC2785	
Q405	8-729-178-54	TRANSISTOR 2SC2785	
Q406	8-729-117-54	TRANSISTOR 2SA1175	
Q421	8-729-177-43	TRANSISTOR 2SD774	
Q422	8-729-194-12	TRANSISTOR 2SC1941	
Q501	8-729-178-54	TRANSISTOR 2SC2785	
Q502	8-729-117-54	TRANSISTOR 2SA1175	

RESISTOR

Ref.No	Part No	Description				Remark
R060	1-246-789-00	CARBON	3.3K		1/8W	
R061	1-246-783-00	CARBON	1K		1/8W	
R062	1-246-848-00	CARBON	2.4K		1/8W	
R063	1-246-791-00	CARBON	4.7K		1/8W	
R101	1-246-787-00	CARBON	2.2K		1/8W	
R102	1-246-790-00	CARBON	3.9K		1/8W	
R103	1-246-787-00	CARBON	2.2K		1/8W	
R104	1-246-800-00	CARBON	27K		1/8W	
R105	1-246-785-00	CARBON	1.5K		1/8W	
R106	1-246-790-00	CARBON	3.9K		1/8W	
R107	1-246-789-00	CARBON	3.3K		1/8W	
R108	1-246-783-00	CARBON	1K		1/8W	
R109	1-246-804-00	CARBON	56K		1/8W	
R110	1-246-807-00	CARBON	100K		1/8W	
R111	1-246-802-00	CARBON	39K		1/8W	
R112	1-246-782-00	CARBON	820		1/8W	
R113	1-247-047-00	CARBON	330K		1/8W	
R114	1-246-777-00	CARBON	330		1/8W	
R115	1-246-850-00	CARBON	3.6K		1/8W	
R116	1-246-850-00	CARBON	3.6K		1/8W	
R119	1-246-778-00	CARBON	390		1/8W	
R121	1-246-776-00	CARBON	270		1/8W	
R122	1-246-807-00	CARBON	100K		1/8W	
R123	1-246-786-00	CARBON	1.8K		1/8W	
R124	1-246-776-00	CARBON	270		1/8W	
R125	1-246-852-00	CARBON	5.1K		1/8W	
R126	1-246-795-00	CARBON	10K		1/8W	
R127	1-246-787-00	CARBON	2.2K		1/8W	
R128	1-246-789-00	CARBON	3.3K		1/8W	
R129⚠.	1-247-107-00	CARBON	100	5%	1/4W	F
R130	1-246-783-00	CARBON	1K		1/8W	
R131	1-246-786-00	CARBON	1.8K		1/8W	
R132	1-246-791-00	CARBON	4.7K		1/8W	
R133	1-246-779-00	CARBON	470		1/8W	
R134	1-246-807-00	CARBON	100K		1/8W	
R135	1-246-777-00	CARBON	330		1/8W	
R151	1-246-807-00	CARBON	100K		1/8W	
R153	1-246-799-00	CARBON	22K		1/8W	
R154⚠.	1-247-082-00	CARBON	8.2	5%	1/4W	F
R201	1-246-783-00	CARBON	1K		1/8W	
R203	1-246-803-00	CARBON	47K		1/8W	
R204	1-246-796-00	CARBON	12K		1/8W	
R205	1-246-801-00	CARBON	33K		1/8W	
R206	1-246-803-00	CARBON	47K		1/8W	
R207	1-246-806-00	CARBON	82K		1/8W	
R208	1-246-795-00	CARBON	10K		1/8W	
R209	1-246-799-00	CARBON	22K		1/8W	
R210	1-246-795-00	CARBON	10K		1/8W	
R211	1-246-795-00	CARBON	10K		1/8W	
R212	1-246-859-00	CARBON	20K		1/8W	
R213	1-246-795-00	CARBON	10K		1/8W	
R214	1-246-795-00	CARBON	10K		1/8W	
R215	1-246-859-00	CARBON	20K		1/8W	
R216	1-246-795-00	CARBON	10K		1/8W	
R217	1-246-795-00	CARBON	10K		1/8W	
R218	1-246-811-00	CARBON	220K		1/8W	
R219	1-246-795-00	CARBON	10K		1/8W	
R220	1-246-795-00	CARBON	10K		1/8W	
R221	1-244-885-00	CARBON	3.3K	5%	1/2W	
R222	1-246-795-00	CARBON	10K		1/8W	
R223	1-246-801-00	CARBON	33K		1/8W	
R224	1-246-806-00	CARBON	82K		1/8W	
R225	1-246-783-00	CARBON	1K		1/8W	
R226	1-246-807-00	CARBON	100K		1/8W	
R227	1-246-811-00	CARBON	220K		1/8W	
R228	1-244-873-00	CARBON	1K	5%	1/2W	
R229	1-246-795-00	CARBON	10K		1/8W	
R230	1-247-047-00	CARBON	330K		1/8W	

NOTE:

The components identified by shading and mark ⚠ are critical for safety.
Replace only with part number specified.

Les composants identifiés par une trame et une marque ⚠ sont critiques pour la sécurité. Ne les remplacer que par une pièce portant le numéro spécifié.

When indicating parts by reference number, please include the board name.

- =>: Oue to standardization, interchangeable replacements may be substituted for parts specified in the diagrams.
- Items marked "♠" are not stocked since they are seldom required for routine service. Some delay should be anticipated when ordering these items.

- All variable and adjustable resistors have characteristic curve B, unless otherwise noted.

CAPACITORS
- MF : μF, PF : μμF

RESISTORS
- All resistors are in ohms
- F : nonflammable

COILS
- MMH : mH, UH : μH

TU-21 BOARD

SW-12 BOARD

Ref.No	Part No	Description				Remark
R231	1-246-801-00	CARBON	33K		1/8W	
R232	1-246-777-00	CARBON	330		1/8W	
R233	1-246-783-00	CARBON	1K		1/8W	
R234	1-246-799-00	CARBON	22K		1/8W	
R235	1-246-795-00	CARBON	10K		1/8W	
R236	1-246-795-00	CARBON	10K		1/8W	
R237	1-246-807-00	CARBON	100K		1/8W	
R238	1-246-795-00	CARBON	10K		1/8W	
R239	1-246-795-00	CARBON	10K		1/8W	
R241	1-246-798-00	CARBON	18K		1/8W	
R242	1-246-788-00	CARBON	2.7K		1/8W	
R243	1-246-475-00	CARBON	1.2K	5%	1/4W	
R244	1-246-801-00	CARBON	33K		1/8W	
R245	1-202-667-00	COMPOSITION	8.2M	5%	1/2W	
R247	1-246-805-00	CARBON	68K		1/8W	
R249	1-246-521-00	CARBON	100K	5%	1/4W	
R259	1-246-807-00	CARBON	100K		1/8W	
R260	1-246-807-00	CARBON	100K		1/8W	
R261	1-246-799-00	CARBON	22K		1/8W	
R262	1-246-787-00	CARBON	2.2K		1/8W	
R263	1-246-799-00	CARBON	22K		1/8W	
R264	1-246-787-00	CARBON	2.2K		1/8W	
R265	1-246-799-00	CARBON	22K		1/8W	
R267	1-246-807-00	CARBON	100K		1/8W	
R269	1-246-787-00	CARBON	2.2K		1/8W	
R275	1-246-795-00	CARBON	10K		1/8W	
R276	1-246-789-00	CARBON	3.3K		1/8W	
R277	1-246-794-00	CARBON	8.2K	5%	1/8W	
R277	1-247-053-00	CARBON	1M		1/8W	
R278	1-246-805-00	CARBON	68K		1/8W	
R401	1-246-852-00	CARBON	5.1K		1/8W	
R402	1-246-795-00	CARBON	10K		1/8W	
R407	1-246-795-00	CARBON	10K		1/8W	
R408	1-246-795-00	CARBON	10K		1/8W	
R421	1-246-783-00	CARBON	1K		1/8W	
R422	1-246-775-00	CARBON	220		1/8W	
R423	1-244-909-00	CARBON	33K	5%	1/2W	
R424	1-244-905-00	CARBON	22K	5%	1/2W	
R425	1-246-795-00	CARBON	10K		1/8W	
R426	1-246-795-00	CARBON	10K		1/8W	
R427	1-246-787-00	CARBON	2.2K		1/8W	
R428	1-246-801-00	CARBON	33K		1/8W	
R429	1-247-047-00	CARBON	330K	5%	1/8W	
R491 ⚠	1-212-850-00	FUSIBLE	5.1	5%	1/4W	F
R501	1-246-803-00	CARBON	47K		1/8W	
R502	1-246-803-00	CARBON	47K		1/8W	
R503	1-246-795-00	CARBON	10K		1/8W	
R504	1-246-801-00	CARBON	33K		1/8W	
R505	1-246-803-00	CARBON	47K		1/8W	
R506	1-246-803-00	CARBON	47K		1/8W	
R507	1-246-788-00	CARBON	2.7K		1/8W	

Ref.No	Part No	Description	Remark
		RF UNIT	
RF101	1-464-151-00	UNIT, COLOR RF (RF-7W(M))	
		VARIABLE RESISTOR	
RV101	1-224-251-XX	RES, ADJ, METAL GLAZE 4.7K	
RV102	1-224-251-XX	RES, ADJ, METAL GLAZE 4.7K	
		FILTER	
SF101	1-404-227-41	SAWF	
		TRANSFORMER	
T101	1-404-153-00	VIFT	
T102	1-404-321-00	VIFT	
T103	1-404-352-00	COIL, VIF	
T104	1-404-318-00	SIFT	
T105	1-404-352-00	COIL, VIF	
T201	1-409-193-00	COIL 3.58MHZ TRAP	
T421	1-421-436-00	TRANSFORMER, FERRITE	
		THERMISTOR	
TH101	1-800-626-00	THERMISTOR	
		TUNER	
TU101	1-463-377-00	TUNER (BT-864)	

****

Ref.No	Part No	Description	Remark
	♠:1-605-410-00	SW-12 BOARD ***********	
	3-701-822-00	HOLDER, WIRE	
		DIODE	
D501	8-719-911-06	DIODE 1SS106	
D502	8-719-911-06	DIODE 1SS106	
D503	8-719-911-06	DIODE 1SS106	
D504	8-719-168-07	DIODE RD6.8E-B	
D505	8-719-168-07	DIODE RD6.8E-B	
		VARIABLE RESISTOR	
RV501	1-228-244-00	RES, VAR, SOLID 100K	
RV502	1-228-359-00	RES, VAR, SOLID 5K	
		SWITCH	
S501	1-553-766-00	SWITCH, KEY BOARD	
S502	1-553-766-00	SWITCH, KEY BOARD	
S503	1-553-716-00	SWITCH, SLIDE	
S504	1-553-754-00	SWITCH, SLIDE	

NOTE:

The components identified by shading and mark ⚠ are critical for safety.
Replace only with part number specified.

Les composants identifiés par une trame et une marque ⚠ sont critiques pour la sécurité. Ne les remplacer que par une pièce portant le numéro spécifié.

When indicating parts by reference number, please include the board name.

- =>: Due to standardization, interchangeable replacements may be substituted for parts specified in the diagrams.
- Items marked " ♠ " are not stocked since they are seldom required for routine service. Some delay should be anticipated when ordering these items.
- All variable and adjustable resistors have characteristic curve B, unless otherwise noted.

CAPACITORS
- MF : μF, PF : μμF

RESISTORS
- All resistors are in ohms
- F : nonflammable

COILS
- MMH : mH, UH : μH

CH-22 BOARD **CH-21 BOARD** **CI-3 BOARD**
CI-2 BOARD **RL-4 BOARD** **LM-9 BOARD** **LM-8 BOARD**

Ref.No	Part No	Description			Remark
	A-6728-243-A	LM-8 BOARD, COMPLETE *********************			
		CAPACITOR			
C101	1-161-057-00	CERAMIC	0.033MF	10%	50V
C102	1-161-057-00	CERAMIC	0.033MF	10%	50V
		COIL			
L101	1-408-120-00	MICRO INDUCTOR 18UH			
L102	1-408-120-00	MICRO INDUCTOR 18UH			

****

	1-605-109-00	LM-9 BOARD **********			
		CAPACITOR			
C001	1-161-057-00	CERAMIC	0.033MF	10%	50V
C002	1-161-057-00	CERAMIC	0.033MF	10%	50V
		DIODE			
D001	8-719-911-06	DIODE 1SS106			
D002	8-719-911-06	DIODE 1SS106			
D003	8-719-911-06	DIODE 1SS106			
		COIL			
L001	1-407-696-00	MICRO INDUCTOR 18UH			
L002	1-407-696-00	MICRO INDUCTOR 18UH			
		SWITCH			
S001	1-552-664-00	SWITCH, MICRO			

****

	♠:1-605-110-00	RL-4 BOARD **********			

****

	A-6728-248-A	CI-2 BOARD, COMPLETE ********************			
	1-553-719-00	SWITCH, MICRO			
	♠:3-670-039-00	HOLDER (R), CSW			

****

	A-6728-249-A	CI-3 BOARD, COMPLETE *********************			
	1-553-719-00	SWITCH, MICRO			
	♠:3-670-038-00	HOLDER (L), CSW			

Ref.No	Part No	Description			Remark
	1-605-581-00	CH-21 BOARD ***********			
	♠:3-662-227-00	HOLDER (R-3), LED			
		CAPACITOR			
C701	1-161-021-00	CERAMIC	0.047MF	10%	25V
		DIODE			
D751	8-719-812-31	DIODE TLR123			
D752	8-719-812-32	DIODE TLY123			
D753	8-719-812-33	DIODE TLG123			
D754	8-719-911-19	DIODE 1SS119			
D755	8-719-812-31	DIODE TLR123			
D756	8-719-812-31	DIODE TLR123			
D757	8-719-812-31	DIODE TLR123			
D758	8-719-812-31	DIODE TLR123			
D759	8-719-812-31	DIODE TLR123			
		IC			
IC701	8-759-619-03	IC M51903L			
		RESISTOR			
R752	1-246-782-00	CARBON	820	1/8W	
R753	1-246-783-00	CARBON	1K	1/8W	
R754	1-246-795-00	CARBON	10K	1/8W	
R755	1-246-787-00	CARBON	2.2K	1/8W	
R756	1-246-787-00	CARBON	2.2K	1/8W	
R757	1-246-787-00	CARBON	2.2K	1/8W	
R758	1-246-787-00	CARBON	2.2K	1/8W	
R759	1-246-787-00	CARBON	2.2K	1/8W	
		SWITCH			
S751	1-553-766-00	SWITCH, KEY BOARD			
S752	1-553-766-00	SWITCH, KEY BOARD			
S753	1-553-766-00	SWITCH, KEY BOARD			
S754	1-553-716-00	SWITCH, SLIDE			
S755	1-553-716-00	SWITCH, SLIDE			

****

	1-605-895-00	CH-22 BOARD ***********			
		NEON LAMP			
NL701	1-519-204-00	LAMP, NEON			
NL702	1-519-204-00	LAMP, NEON			
NL703	1-519-204-00	LAMP, NEON			
NL704	1-519-204-00	LAMP, NEON			
NL705	1-519-204-00	LAMP, NEON			
NL706	1-519-204-00	LAMP, NEON			
NL707	1-519-204-00	LAMP, NEON			
NL708	1-519-204-00	LAMP, NEON			
NL709	1-519-204-00	LAMP, NEON			

NOTE:

The components identified by shading and mark ⚠ are critical for safety. Replace only with part number specified.

Les composants identifiés par une trame et une marque ⚠ sont critiques pour la sécurité. Ne les remplacer que par une pièce portant le numéro spécifié.

When indicating parts by reference number, please include the board name.

- =>: Due to standardization, interchangeable replacements may be substituted for parts specified in the diagrams.
- Items marked " ♠ " are not stocked since they are seldom required for routine service. Some delay should be anticipated when ordering these items.
- All variable and adjustable resistors have characteristic curve B, unless otherwise noted.

CAPACITORS
- MF : μF, PF : μμF

RESISTORS
- All resistors are in ohms
- F : nonflammable

COILS
- MMH : mH, UH : μH

CH-22 BOARD RL-7 BOARD N BOARD TIMER BLOCK

Ref.No	Part No	Description	Remark
NL710	1-519-204-00	LAMP, NEON	
NL711	1-519-204-00	LAMP, NEON	
NL712	1-519-204-00	LAMP, NEON	
NL713	1-519-204-00	LAMP, NEON	
NL714	1-519-204-00	LAMP, NEON	

SWITCH

Ref.No	Part No	Description	Remark
S701	1-553-766-00	SWITCH, KEY BOARD	
S702	1-553-766-00	SWITCH, KEY BOARD	
S703	1-553-766-00	SWITCH, KEY BOARD	
S704	1-553-766-00	SWITCH, KEY BOARD	
S705	1-553-766-00	SWITCH, KEY BOARD	
S706	1-553-766-00	SWITCH, KEY BOARD	
S707	1-553-766-00	SWITCH, KEY BOARD	
S708	1-553-766-00	SWITCH, KEY BOARD	
S709	1-553-766-00	SWITCH, KEY BOARD	
S710	1-553-766-00	SWITCH, KEY BOARD	
S711	1-553-766-00	SWITCH, KEY BOARD	
S712	1-553-766-00	SWITCH, KEY BOARD	
S713	1-553-766-00	SWITCH, KEY BOARD	
S714	1-553-766-00	SWITCH, KEY BOARD	

****

♠:1-606-001-00 RL-7 BOARD
****

♠:3-670-167-00 INSULATOR

CONNECTOR

Ref.No	Part No	Description	Remark
CN001	♠:1-560-472-00	PIN, CONNECTOR 12P	
CN002	♠:1-560-470-00	PIN, CONNECTOR 8P	

DIODE

Ref.No	Part No	Description	Remark
D201	8-719-911-06	DIODE 1SS106	
D202	8-719-911-06	DIODE 1SS106	
D203	8-719-911-06	DIODE 1SS106	

****

1-603-976-00 N BOARD
****

1-232-004-00 COMPOSITION CIRCUIT BLOCK
♠:4-348-551-00 PLATE, SHIELD

CAPACITOR

Ref.No	Part No	Description			
C001	1-123-617-00	ELECT	10MF	20%	16V
C002	1-123-617-00	ELECT	10MF	20%	16V
C003	1-123-617-00	ELECT	10MF	20%	16V
C004	1-161-019-00	CERAMIC	0.033MF	10%	25V
C005	1-108-567-00	MYLAR	0.0033MF	5%	50V

DIODE

Ref.No	Part No	Description	Remark
D001	=>8-719-110-32	DIODE PH302B	

Ref.No	Part No	Description	Remark

IC

Ref.No	Part No	Description	Remark
IC001	8-759-113-73	IC UPC1373H	

COIL

Ref.No	Part No	Description	Remark
L001	1-404-310-00	COIL	

****

1-548-552-00 TIMER BLOCK
****

9-982-255-00 FLOURECENT DISPLAY

CAPACITOR

Ref.No	Part No	Description			
C1	1-123-333-00	ELECT	100MF	20%	25V
C2	1-101-006-00	CERAMIC	0.047MF	Z%	50V
C3	1-102-074-00	CERAMIC	0.001MF	10%	50V
C4	1-123-359-00	ELECT	47MF	20%	50V
C5	1-102-074-00	CERAMIC	0.001MF	10%	50V
C6	1-123-306-00	ELECT	47MF	20%	10V
C7	1-123-381-00	ELECT	2.2MF	20%	100V
C8	1-102-121-00	CERAMIC	0.0022MF	10%	50V
C9	1-123-306-00	ELECT	47MF	20%	10V
C10	1-123-382-00	ELECT	3.3MF	20%	100V
C11	1-102-508-00	CERAMIC	10PF	5%	50V
C12	9-982-056-00	TRIMMER	4PF TO 28PF		
C13	1-123-382-00	ELECT	3.3MF	20%	50V
C15	1-102-129-00	CERAMIC	0.01MF	10%	50V
C16	1-102-038-00	CERAMIC	0.001MF		500V
C17	1-101-006-00	CERAMIC	0.047MF	Z%	50V
C18	1-102-038-00	CERAMIC	0.001MF		500V

COMPOSITION CIRCUIT BLOCK

Ref.No	Part No	Description	Remark
CP1	9-982-069-00	COMPOSITION CIRCUIT BLOCK 220Kx4	

DIODE

Ref.No	Part No	Description	Remark
D1	8-719-911-19	DIODE 1SS119	
D2	8-719-100-29	DIODE RD5.1EB1	
D3	8-719-106-07	DIODE RD36E-B	
D4	8-719-911-19	DIODE 1SS119	
D5	8-719-100-29	DIODE RD5.1EB1	
D6	8-719-911-19	DIODE 1SS119	
D7	8-719-911-19	DIODE 1SS119	
D8	8-719-100-31	DIODE RD5.1EB3	
D9	8-719-911-19	DIODE 1SS119	
D10	8-719-100-22	DIODE RD4.3EB1	
D11	9-982-258-00	DIODE TLS-123	
D12	8-719-911-19	DIODE 1SS119	
D13	8-719-911-19	DIODE 1SS119	
D15	8-719-911-19	DIODE 1SS119	
D16	8-719-911-19	DIODE 1SS119	
D17	8-719-911-19	DIODE 1SS119	

NOTE:

The components identified by shading and mark ⚠ are critical for safety.
Replace only with part number specified.

Les composants identifiés par une trame et une marque ⚠ sont critiques pour la sécurité. Ne les remplacer que par une pièce portant le numéro spécifié.

When indicating parts by reference number, please include the board name.

- =>: Due to standardization, interchangeable replacements may be substituted for parts specified in the diagrams.
- Items marked " ♠ " are not stocked since they are seldom required for routine service. Some delay should be anticipated when ordering these items.
- All variable and adjustable resistors have characteristic curve B, unless otherwise noted.

CAPACITORS
- MF : μF, PF : μμF

RESISTORS
- All resistors are in ohms
- F : nonflammable

COILS
- MMH : mH, UH : μH

Ref.No	Part No	Description	Remark
D18	8-719-911-19	DIODE 1SS119	
D19	8-719-911-19	DIODE 1SS119	
D20	8-719-911-19	DIODE 1SS119	
D21	8-719-911-19	DIODE 1SS119	
D22	8-719-911-19	DIODE 1SS119	
D23	8-719-911-19	DIODE 1SS119	

IC

Ref.No	Part No	Description	Remark
IC1	9-982-051-00	IC MSL915RS	
IC2	9-982-051-00	IC MSL915RS	
IC3	9-982-051-00	IC MSL915RS	
IC4	9-982-071-00	IC MB8845-495M	

COIL

Ref.No	Part No	Description	Remark
L1	9-982-059-00	MICRO INDUCTOR 100UH	

TRANSISTOR

Ref.No	Part No	Description	Remark
Q1	8-764-803-00	TRANSISTOR 2SC1816-3	
Q2	8-763-314-00	TRANSISTOR 2SC1760-14	
Q3	8-763-314-00	TRANSISTOR 2SC1760-14	
Q4	8-729-853-63	TRANSISTOR 2SC536SP	
Q5	8-729-853-63	TRANSISTOR 2SC536SP	
Q6	8-729-853-63	TRANSISTOR 2SC536SP	
Q7	8-729-853-63	TRANSISTOR 2SC536SP	
Q8	8-729-853-63	TRANSISTOR 2SC536SP	
Q9	8-729-853-63	TRANSISTOR 2SC536SP	

RESISTOR

Ref.No	Part No	Description				Remark
R1	1-246-485-00	CARBON	3.3K	5%	1/4W	
R2	1-246-449-00	CARBON	100	5%	1/4W	
R3	1-246-489-00	CARBON	4.7K	5%	1/4W	
R4	1-246-469-00	CARBON	680	5%	1/4W	
R5	1-246-473-00	CARBON	1K	5%	1/4W	
R6	1-246-453-00	CARBON	150	5%	1/4W	
R7	1-246-433-00	CARBON	22	5%	1/4W	
R8	1-246-473-00	CARBON	1K	5%	1/4W	
R9	1-246-513-00	CARBON	47K	5%	1/4W	
R10	1-246-513-00	CARBON	47K	5%	1/4W	
R11	1-246-459-00	CARBON	270	5%	1/4W	
R12	1-246-465-00	CARBON	470	5%	1/4W	
R13	1-246-521-00	CARBON	100K	5%	1/4W	
R14	1-246-521-00	CARBON	100K	5%	1/4W	
R15	1-246-482-00	CARBON	2.4K	5%	1/4W	
R16	9-982-057-00	SOLID	10M	5%	1/4W	
R17	1-246-513-00	CARBON	47K	5%	1/4W	
R18	1-246-481-00	CARBON	2.2K	5%	1/4W	
R19	1-246-451-00	CARBON	120	5%	1/4W	
R20	1-246-513-00	CARBON	47K	5%	1/4W	
R21	1-246-513-00	CARBON	47K	5%	1/4W	
R22	1-246-485-00	CARBON	3.3K	5%	1/4W	
R23	1-246-485-00	CARBON	3.3K	5%	1/4W	
R24	1-212-849-00	FUSIBLE	4.7	5%	1/4W	F

SWITCH

Ref.No	Part No	Description	Remark
S1	1-553-766-00	SWITCH, KEY BOARD	
S2	1-553-766-00	SWITCH, KEY BOARD	
S3	1-553-766-00	SWITCH, KEY BOARD	
S4	1-553-766-00	SWITCH, KEY BOARD	
S5	1-553-766-00	SWITCH, KEY BOARD	
S6	1-553-766-00	SWITCH, KEY BOARD	
S7	1-553-716-00	SWITCH, SLIDE	
S8	1-553-716-00	SWITCH, SLIDE	

TRANSFORMER

Ref.No	Part No	Description	Remark
T1	9-982-073-00	TRANSFORMER, CONVERTER	
T2	9-982-074-00	TRANSFORMER, CONVERTER	

****

⚠ .1-413-081-11 POWER BLOCK (SR-11A)
****

⚠ .1-551-964-00 CORD, POWER
⚠ .1-561-347-00 SOCKET, AC

CAPACITOR

Ref.No	Part No	Description				Remark
C1	⚠ .1-130-680-00	POLYPRO	0.1MF	20%	125V	
C2	⚠ .1-130-680-00	POLYPRO	0.1MF	20%	125V	
C3	⚠ .1-161-747-00	CERAMIC	0.0022MF	20%	125V	
C4	⚠ .1-161-747-00	CERAMIC	0.0022MF	20%	125V	
C5	⚠ .1-161-747-00	CERAMIC	0.0022MF	20%	125V	
C6	⚠ .1-123-665-00	ELECT	330MF	20%	200V	
C7	⚠ .1-123-580-00	ELECT	4.7MF	20%	350V	
C8	⚠ .1-123-580-00	ELECT	4.7MF	20%	350V	
C9	⚠ .1-123-336-00	ELECT	470MF	20%	25V	
C10	⚠ .1-106-188-00	MYLAR	0.0047MF	5%	100V	
C11	⚠ .1-106-180-00	MYLAR	0.0022MF	5%	100V	
C12	⚠ .1-106-180-00	MYLAR	0.0022MF	5%	100V	
C13	⚠ .9-982-264-00	POLYPRO	0.0047MF	5%	100V	
C14	⚠ .1-106-188-00	MYLAR	0.0047MF	5%	100V	
C15	⚠ .1-106-188-00	MYLAR	0.0047MF	5%	100V	
C16	⚠ .1-108-595-00	MYLAR	0.047MF	5%	50V	
C17	⚠ .9-982-187-00	ELECT	2200MF	20%	16V	
C18	⚠ .1-123-335-00	ELECT	330MF	20%	25V	
C20	⚠ .1-123-323-00	ELECT	470MF	20%	16V	
C21	⚠ .1-108-595-00	MYLAR	0.047MF	5%	50V	
C22	⚠ .9-982-188-00	ELECT	100MF	20%	16V	
C23	⚠ .1-108-587-00	MYLAR	0.022MF	5%	50V	
C24	⚠ .1-123-323-00	ELECT	470MF	20%	16V	
C25	⚠ .1-123-333-00	ELECT	100MF	20%	25V	
C26	⚠ .1-123-356-00	ELECT	10MF	20%	50V	
C27	⚠ .1-123-332-00	ELECT	47MF	20%	25V	
C28	⚠ .1-123-318-00	ELECT	33MF	20%	16V	
C29	⚠ .1-161-747-00	CERAMIC	0.0022MF	20%	125V	
C30	⚠ .1-108-579-00	MYLAR	0.01MF	5%	50V	
C31	⚠ .1-123-380-00	ELECT	1MF	20%	100V	

NOTE:

The components identified by shading and mark ⚠ are critical for safety.
Replace only with part number specified.

Les composants identifiés par une trame et une marque ⚠ sont critiques pour la sécurité.
Ne les remplacer que par une pièce portant le numéro spécifié.

When indicating parts by reference number, please include the board name.

- =>: Due to standardization, interchangeable replacements may be substituted for parts specified in the diagrams.
- Items marked " ♦ " are not stocked since they are seldom required for routine service. Some delay should be anticipated when ordering these items.

- All variable and adjustable resistors have characteristic curve B, unless otherwise noted.

CAPACITORS
- MF : μF, PF : μμF

RESISTORS
- All resistors are in ohms
- F : nonflammable

COILS
- MMH : mH, UH : μH

POWER BLOCK

Ref.No	Part No	Description				Remark
C32	⚠ .9-982-191-00	ELECT	22MF	20%	50V	
C33	⚠ .1-123-380-00	ELECT	1MF	20%	100V	
C34	⚠ .1-102-114-00	CERAMIC	470PF	10%	50V	
C35	⚠ .1-106-180-00	MYLAR	0.0022MF	5%	100V	
C36	⚠ .1-106-180-00	MYLAR	0.0022MF	5%	100V	
C37	⚠ .1-161-747-00	CERAMIC	0.0022MF	20%	125V	

CONNECTER

CN1	1-560-676-00	PIN, CONNECTOR 3P

DIODE

D1	⚠ .8-719-503-40	DIODE S3V40
D2	⚠ .8-719-503-40	DIODE S3V40
D3	⚠ .8-719-503-40	DIODE S3V40
D4	⚠ .8-719-503-40	DIODE S3V40
D5	⚠ .8-719-500-01	DIODE S1WB10
D6	⚠ .8-719-550-02	DIODE S5KC20
D7	⚠ .8-719-923-48	DIODE 1S2348H
D8	⚠ .8-719-981-01	DIODE ERA81-004
D9	⚠ .8-719-100-72	DIODE RD15EB3
D10	⚠ .8-719-815-85	DIODE 1S1585
D11	⚠ .8-719-981-01	DIODE ERA81-004
D12	⚠ .8-719-815-85	DIODE 1S1585
D13	⚠ .8-719-815-85	DIODE 1S1585

FUSE

F1	⚠ .1-532-403-XX	FUSE, 3.15A 125V

IC

IC1	⚠ .8-759-937-59	IC MB3759
IC2	⚠ .8-759-133-90	IC UPC339C
IC3	⚠ .8-759-170-08	IC UPC78M08H

TRANSISTOR

Q1	⚠ .8-729-925-02	TRANSISTOR 2SC2502
Q2	⚠ .8-729-925-02	TRANSISTOR 2SC2502
Q3	⚠ .8-729-663-47	TRANSISTOR 2SC1364-7
Q4	⚠ .8-729-177-23	TRANSISTOR 2SB772-P
Q5	⚠ .8-729-177-23	TRANSISTOR 2SB772-P

RESISTOR

Ref.No	Part No	Description				Remark
R1	⚠ .9-982-261-00	WIREWOUND	1	10%	5W	F
R2	⚠ .1-244-929-00	CARBON	220K	5%	1/2W	
R3	⚠ .1-202-727-00	SOLID	4.7M	10%	1/2W	
R4	⚠ .1-246-441-00	CARBON	47	5%	1/4W	
R5	⚠ .1-246-441-00	CARBON	47	5%	1/4W	
R6	⚠ .1-246-483-00	CARBON	2.7K	5%	1/4W	
R7	⚠ .1-244-841-00	CARBON	47	5%	1/2W	
R8	⚠ .1-244-835-00	CARBON	27	5%	1/2W	
R9	⚠ .1-217-596-00	METAL PLATE	0.05	10%	2W	
R10	⚠ .1-246-491-00	CARBON	5.6K	5%	1/4W	
R11	⚠ .1-246-529-00	CARBON	220K	5%	1/4W	
R12	⚠ .1-246-535-00	CARBON	390K	5%	1/4W	
R13	⚠ .1-246-491-00	CARBON	5.6K	5%	1/4W	
R14	⚠ .1-246-511-00	CARBON	39K	5%	1/4W	
R15	⚠ .1-246-493-00	CARBON	6.8K	5%	1/4W	
R16	⚠ .1-246-483-00	CARBON	2.7K	5%	1/4W	
R17	⚠ .1-246-489-00	CARBON	4.7K	5%	1/4W	
R18	⚠ .1-246-487-00	CARBON	3.9K	5%	1/4W	
R19	⚠ .1-246-481-00	CARBON	2.2K	5%	1/4W	
R20	⚠ .1-246-491-00	CARBON	5.6K	5%	1/4W	
R21	⚠ .1-246-521-00	CARBON	100K	5%	1/4W	
R22	⚠ .1-246-497-00	CARBON	10K	5%	1/4W	
R24	⚠ .1-246-473-00	CARBON	1K	5%	1/4W	
R25	⚠ .1-246-489-00	CARBON	4.7K	5%	1/4W	
R26	⚠ .1-246-491-00	CARBON	5.6K	5%	1/4W	
R27	⚠ .1-244-853-00	CARBON	150	5%	1/2W	
R28	⚠ .1-246-501-00	CARBON	15K	5%	1/4W	
R29	⚠ .1-246-497-00	CARBON	10K	5%	1/4W	
R30	⚠ .1-246-469-00	CARBON	680	5%	1/4W	
R31	⚠ .1-246-481-00	CARBON	2.2K	5%	1/4W	
R32	⚠ .1-246-477-00	CARBON	1.5K	5%	1/4W	
R33	⚠ .1-246-401-00	CARBON	1	5%	1/4W	
R34	⚠ .1-246-401-00	CARBON	1	5%	1/4W	
R35	⚠ .1-246-497-00	CARBON	10K	5%	1/4W	
R36	⚠ .1-246-497-00	CARBON	10K	5%	1/4W	
R37	⚠ .1-246-481-00	CARBON	2.2K	5%	1/4W	
R38	⚠ .1-246-473-00	CARBON	1K	5%	1/4W	
R39	⚠ .1-246-497-00	CARBON	10K	5%	1/4W	
R40	⚠ .9-982-262-00	FUSIBLE	3.3	5%	1/2W	F
R41	⚠ .9-982-185-00	METAL PLATE	1	10%	2W	
R42	⚠ .9-982-263-00	FUSIBLE	2.2	5%	1/4W	F
R43	⚠ .1-246-497-00	CARBON	10K	5%	1/4W	
R44	⚠ .1-244-835-00	CARBON	27	5%	1/2W	
R45	⚠ .1-244-849-00	CARBON	100	5%	1/2W	

VARIABLE RESISTOR

RV1	⚠ .1-226-707-00	SOLID 1K
RV2	⚠ .1-226-707-00	SOLID 1K
RV3	⚠ .1-226-770-00	METAL GLAZE 470

RELAY

RL1	⚠ .9-982-184-00	RELAY MR31-12U

TRANSFOMER

T1	⚠ .1-421-439-00	CHOKE COIL, NORMAL
T2	⚠ .1-421-439-00	CHOKE COIL, NORMAL
T3	⚠ .1-421-438-00	CHOKE COIL, COMMON
T4	⚠ .1-413-073-00	TRANSFORMER, SWITCHING
T5	⚠ .1-437-097-00	TRANSFORMER, DRIVE
T6	⚠ .1-447-197-00	TRANSFORMER, AC
T7	⚠ .9-982-193-00	CHOKE COIL (C)
T8	⚠ .9-982-194-00	CHOKE CIOL, POWER
T9	⚠ .9-982-195-00	CHOKE COIL (A)
T10	⚠ .9-982-196-00	CHOKE COIL (B)

NOTE:

The components identified by shading and mark ⚠ are critical for safety. Replace only with part number specified.

Les composants identifiés par une trame et une marque ⚠ sont critiques pour la sécurité. Ne les remplacer que par une pièce portant le numéro spécifié.

When indicating parts by reference number, please include the board name.

- =>: Due to standardization, interchangeable replacements may be substituted for parts specified in the diagrams.
- Items marked " ♠ " are not stocked since they are seldom required for routine service. Some delay should be anticipated when ordering these items.

- All variable and adjustable resistors have characteristic curve B, unless otherwise noted.

CAPACITORS
- MF : μF, PF : μμF

RESISTORS
- All resistors are in ohms
- F : nonflammable

COILS
- MMH : mH, UH : μH

Ref.No	Part No	Description	Remark
T11 ⚠	.9-982-196-00	CHOKE COIL (B)	
T12 ⚠	.9-982-194-00	CHOKE COIL, POWER	

****

MISCELLANEOUS
****

A-6761-043-A ACE ASSY (M-2)

****

ACCESSORIES AND PACKING MATERIALS
****

Part.No	Description	Remark
A-6701-177-A	COMMANDER ASSY	
1-417-063-00	TRANSFORMER, ANTENNA (EAC-24)	
1-513-379-00	CONVERTER (EAC-25)	
1-551-139-00	CORD, CONNECTION	
1-551-644-41	CORD, CONNECTION	
3-660-986-00	SHEET, PROTECTION	
3-671-402-00	INDICATOR, ACCESSORY	
3-671-832-00	BAG, PROTECTION	
3-671-873-00	CASE, ACCESSORY	
3-674-305-00	CUSHION (LOWER FRONT)	
3-674-306-00	CUSHION (LOWER REAR)	
3-674-307-00	CUSHION (UPPER FRONT)	
3-674-308-00	CUSHION (UPPER REAR)	
3-674-309-00	INDIVIDUAL CARTON	
3-674-317-00	LID, ACCESSORY CASE	
3-703-338-01	LABEL, UL (570F)	
3-783-869-21	MANUAL, INSTRUCTION (US/CANADIAN MODEL)	
3-783-869-31	MANUAL, INSTRUCTION (CANADIAN MODEL)	
3-795-338-21	MANUAL, INSTRUCTION (US/CANADIAN MODEL)	
3-795-338-31	MANUAL, INSTRUCTION (CANADIAN MODEL)	
3-783-869-51	MANUAL, INSTRUCTION (E MODEL)	
3-795-338-51	MANUAL, INSTRUCTION (E MODEL)	
4-491-302-31	CARD, WARRANTY (CANADIAN MODEL)	
4-491-335-21	CARD, WARRANTY (US, E MODEL)	
4-491-336-21	REGISTRATION (US, E MODEL)	

NOTE:

The components identified by shading and mark ⚠ are critical for safety. Replace only with part number specified.

Les composants identifiés par une trame et une marque ⚠ sont critiques pour la sécurité. Ne les remplacer que par une pièce portant le numéro spécifié.

When indicating parts by reference number, please include the board name.

- =>: Due to standardization, interchangeable replacements may be substituted for parts specified in the diagrams.
- Items marked " ● " are not stocked since they are seldom required for routine service. Some delay should be anticipated when ordering these items.

- All variable and adjustable resistors have characteristic curve B, unless otherwise noted.

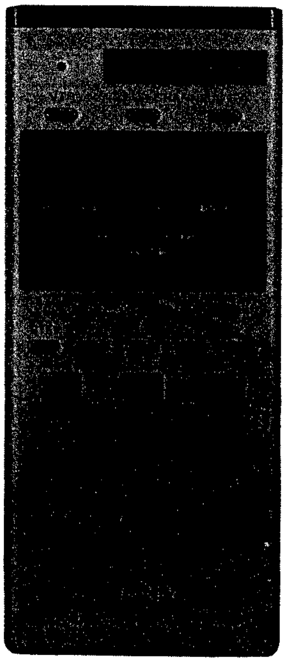
CAPACITORS
- MF : μF, PF : μμF

RESISTORS
- All resistors are in ohms
- F : nonflammable

COILS
- MMH : mH, UH : μH

MEMO

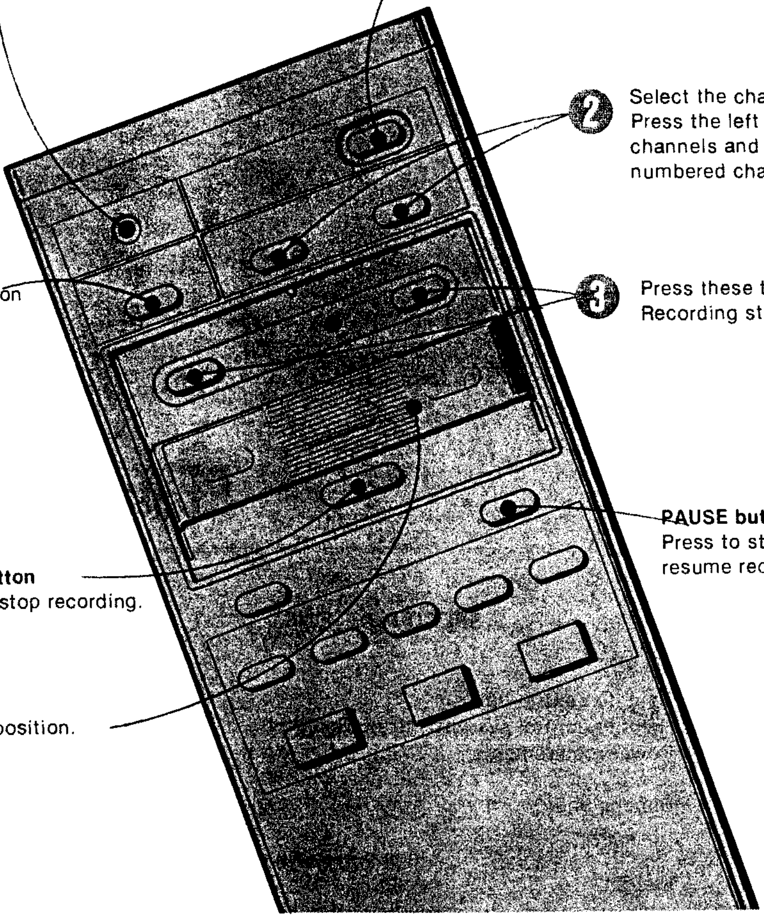
RMT-312



REMOTE CONTROL UNIT

SPECIFICATIONS

Remote control unit	
Remote control system	Infrared control
Power requirements	3V dc, 2 size AA batteries (IEC designation R6)
Dimensions	Approx. 65 × 150 × 16 mm (w/h/d) ($2^5/8$ × 6 × $^3/4$ inches) incl. projecting parts and controls
Weight	Approx. 140 g (5 oz) incl. batteries



POWER switch
Press to turn the power on. (To turn it off, press again.)

Remote function indicator
Lights up when any of the buttons on the remote control unit are pressed.

❷ Select the channel
Press the left button for lower-numbered channels and the right button for higher-numbered channels.

VTR button
Functions in the same way as the PROGRAM SELECT button on the recorder.
The ON-VTR lamp will indicate the selected mode.

❸ Press these two buttons simultaneously. Recording starts.

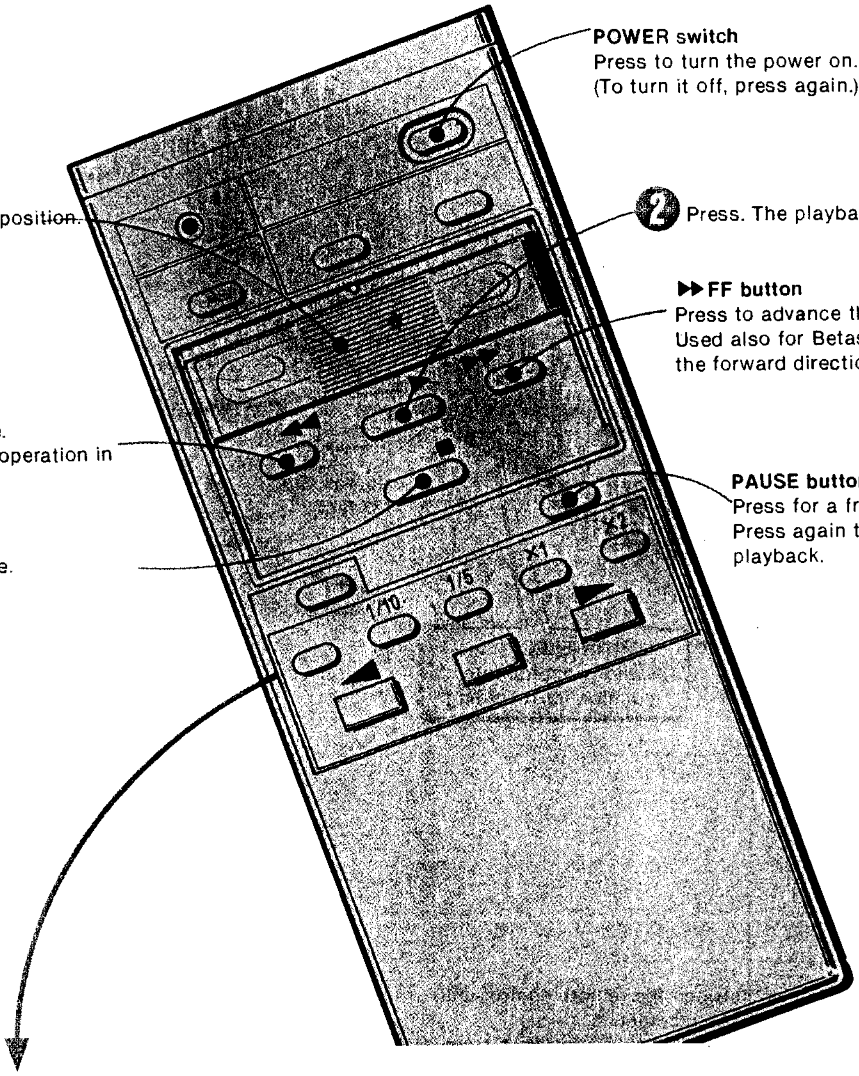
PAUSE button
Press to stop the tape momentarily. To resume recording, press again.

STOP button
Press to stop recording.

❶ Slide the cover to this position.

- The unused channels can be skipped during channel selection with the remote control unit if you have cleared the memory of these channels as described in "Clearing unused channels" on page 9 of the accompaning "SET-UP GUIDE".
- Recording will start immediately when the RECORD buttons on the remote control unit are pressed, even if a camera is connected to the recorder.

Playbaok
The **buttons** on the remote control unit perform the same function as the corresponding buttons on the video recorder.



POWER switch
Press to turn the power on.
(To turn it off, press again.)

❶ Slide the cover to this position.

❷ Press. The playback begins.

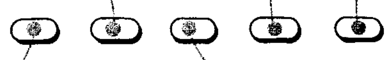
▶▶FF button
Press to advance the tape rapidly.
Used also for Betascan operation in the forward direction.

REW ◀◀ button
Press to rewind the tape.
Used also for Betascan operation in the reverse direction.

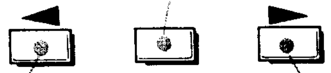
PAUSE button
Press for a freeze picture.
Press again to resume normal speed playback.

❸ Press to stop the tape.

To see the **playback picture at various speeds**
❶ Press the SWING SEARCH button during playback.
❶ Select the playback speed.


Normal speed picture
Slow motion (1/10 speed) pictue
Double speed picture
Frame-by-frame picture
Slow motion (1/5 speed) picture

❶ Select the playback direction.

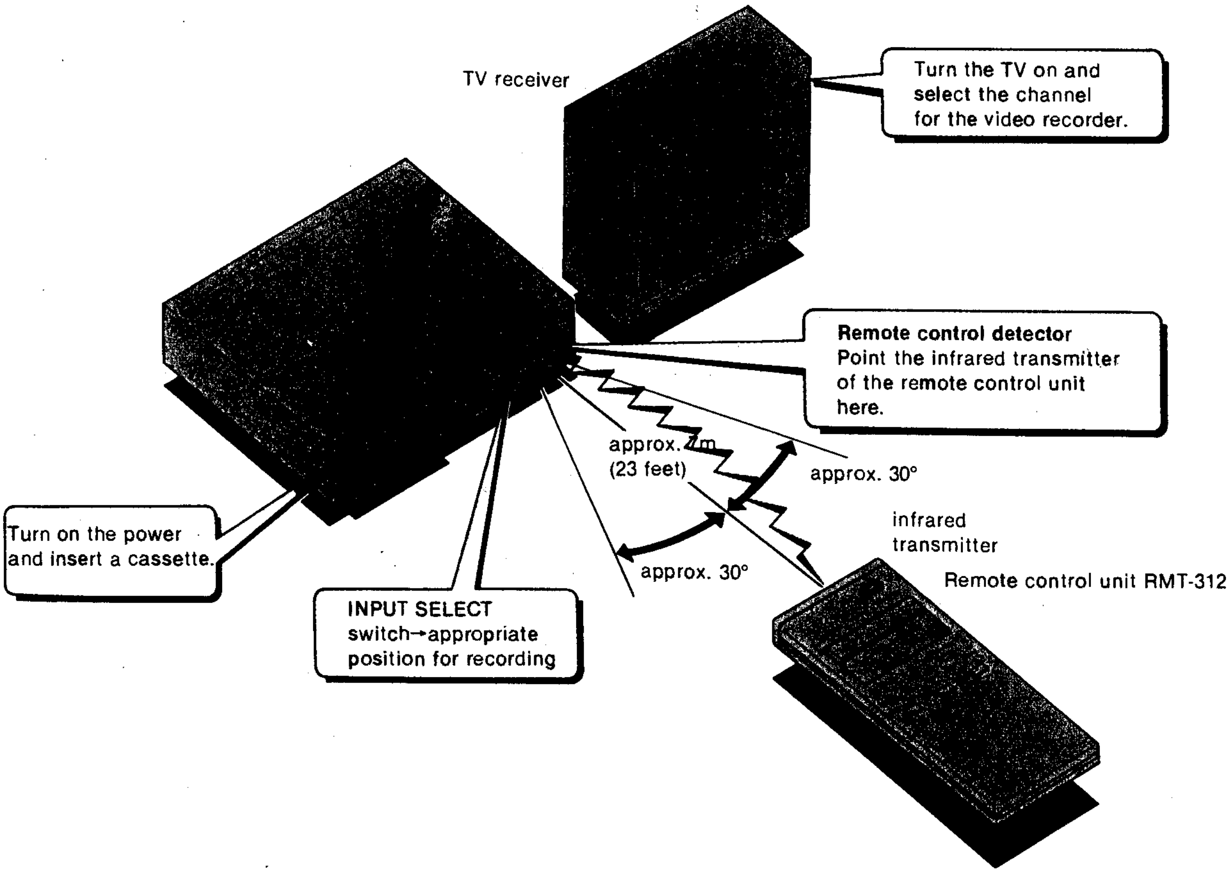

For freeze picture
For reverse
For forward

- For frame-by-frame playback, press and release the ◀ or ▶ button reepeatedly. Keep the button depressed for continous frame-by-frame playback.
- Back and forth playback is also possible in the same way as with the buttons on the recorder.

To resume normal playback, press the PLAY ▶ button.

HOW TO USE THE REMOTE CONTROL UNIT

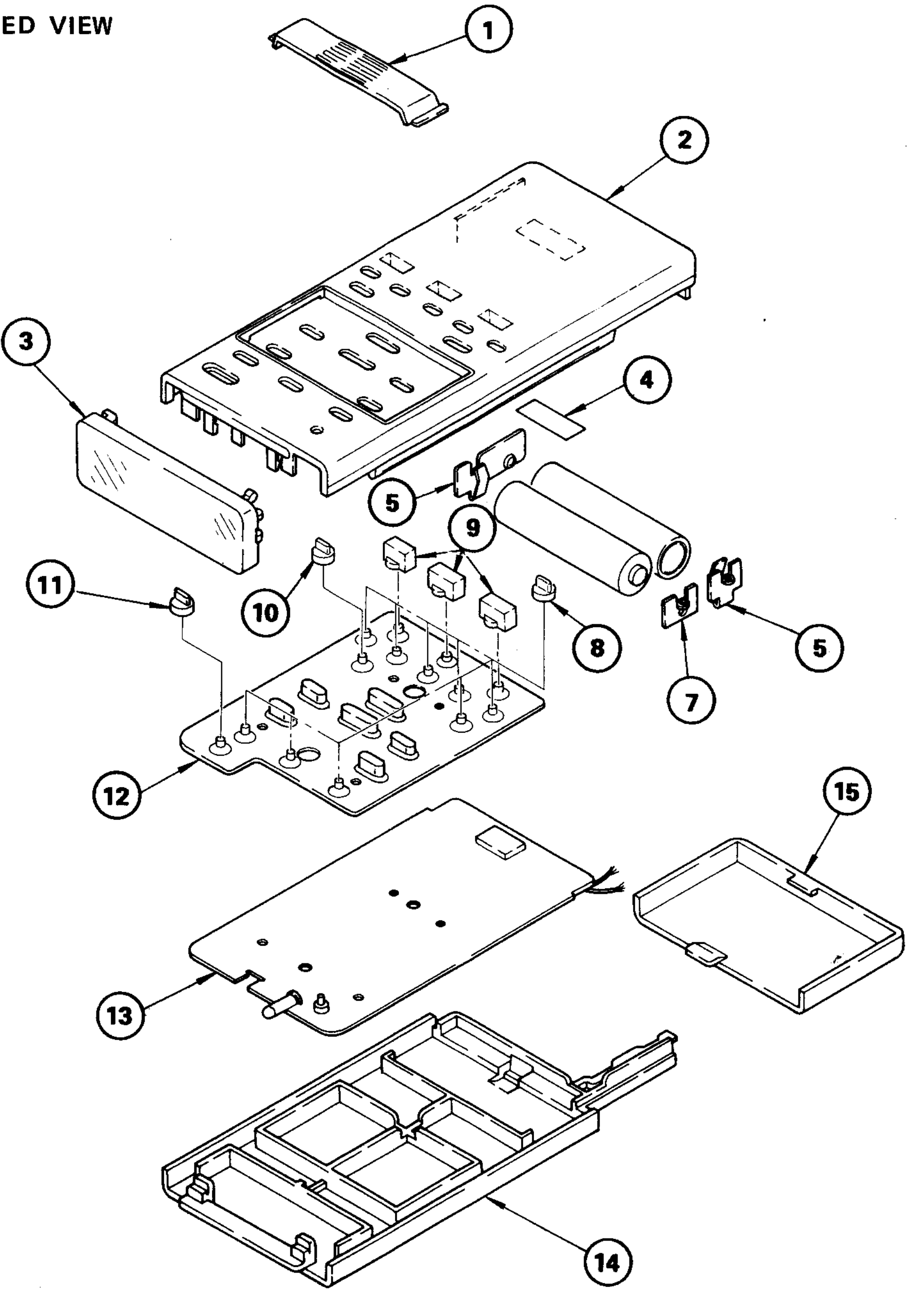
Preparation


TV receiver
Turn the TV on and select the channel for the video recorder.
Remote control detector
Point the infrared transmitter of the remote control unit here.
approx. 7m (23 feet)
approx. 30°
infrared transmitter
Remote control unit RMT-312
approx. 30°
Turn on the power and insert a cassette.
INPUT SELECT switch→appropriate position for recording

Notes

- There should be no obstacles between the remote control unit and the remote control detector of the recorder.
- The shorter the distance between the remote control unit and the recorder, the wider the angle within which the recorder can be controlled.

5. EXPLODED VIEW



No.	Part No	Description	Remark
1	2-290-603-00	CURSOR	
2	X-3670-033-2	CASE (D) ASSY, UPPER	
3	2-290-608-00	PLATE, FROSTED	
4	♠ :3-703-159-00	LA8EL, DESTINATION	
5	4-350-925-00	TERMINAL (C), BATTERY	
6	2-290-601-00	TERMINAL (A), BATTERY	
7	2-290-602-00	TERMINAL (8), BATTERY	
8	2-294-403-00	PUSH 8UTTON (S)	
9	2-290-604-11	PUSH BUTTON	
10	2-294-403-11	PUSH BUTTON (S)	
11	2-294-401-00	BUTTON (S), POWER	
12	3-671-B06-00	SHEET (0), RUBBER	
13	♠ :1-6D5-972-12	IR-6 BOARD	
14	2-290-611-00	CASE, LOWER	
15	2-290-606-00	COVER, BATTtRY	

The components identified by shading and mark ⚠ are critical for safety.
Replace only with part number specified.

Les composants identifiés par une trame et une marque ⚠ sont critiques pour la sécurité.
Ne les remplacer que par une pièce portant le numéro spécifié.

NOTE:
- Items with no part number and no description are not stocked because they are seldom required for routine service.
- The construction parts of an assembled part are indicated with a collation number in the remark column.
- As to the part numbered with E-, refer to the electrical parts list.
- Items marked " ♠ " are not stocked since they are seldom required for routine service. Some delay should be anticipated when ordering these items.

STANDARD PARTS LIST

ELECTROLYTIC CAPACITORS

	RATING → : Use the high voltege rated one.						
CAP. (μF)	6.3 VOLT.	10 VOLT.	16 VOLT.	25 VOLT.	35 VOLT.	50 VOLT.	63 VOLT.
	PART No.	PART No.	PART No.	PART No.	PART No.	PART No.	PART No.
0.47						→	→
1.0						→	→
2.2						→	→
3.3						→	→
4.7				→	→	→	1-123-369-00
10			→	→	→	1-123-356-00	1-123-370-00
22			→	1-123-330-00	→	1-123-357-00	1-123-371-00
33	→	→	1-123-318-00	→	1-123-343-00	→	1-123-372-00
47	→	1-123-306-00	→	1-123-332-00	→	1-123-359-00	1-123-373-00
100	→	1-123-307-00	→	1-123-333-00	1-123-345-00	1-123-360-00	1-123-374-00
220	→	1-123-308-00	1-123-321-00	1-123-334-00	1-123-346-00	1-123-361-00	1-123-375-00
330	→	1-123-309-00	1-123-322-00	1-123-335-00	1-123-347-00	1-123-362-00	1-123-376-00
470	1-123-298-00	1-123-310-00	1-123-323-00	1-123-336-00	1-123-348-00	1-123-363-00	1-123-377-00
1000	1-123-299-00	1-123-311-00	1-123-324-00	1-123-337-00	1-123-349-00	1-123-364-00	1-123-378-00
2200	1-123-300-00	→	1-123-325-00	1-123-338-00	1-123-350-00		
3300	1-123-301-00	1-123-313-00	1-123-326-00	1-123-339-00			
4700	1-123-302-00	1-123-314-00	1-123-327-00				
6800	1-123-303-00	1-123-315-00					
10000	1-123-304-00						

CAP. (μF)	100 VOLT.	166 VOLT.	250 VOLT.	250 VOLT.
	PART No.	PART No.	PART No.	PART No.
0.47	1-123-379-00			
1.0	1-123-380-00	1-123-252-00	1-123-003-00	1-121-168-00
2.2	1-123-381-00	1-123-026-00	1-123-027-00	1-123-028-00
3.3	1-123-382-00	1-121-707-00	1-123-004-00	1-123-006-00
4.7	1-123-383-00	1-121-246-00	1-121-759-00	1-123-007-00
10	1-123-384-00	1-121-999-00	1-123-254-00	1-123-008-00
22	1-123-385-00	1-123-253-00	1-123-005-00	1-123-022-00
33	1-123-386-00	1-121-757-00		
47	1-123-387-00	1-121-919-00		
100	1-123-388-00			
220	1-123-389-00			
330	1-123-390-00			
470	1-123-391-00			

CERAMIC CAPACITORS

			RATING				
CAP. (pF)	50 VOLT.	CAP. (pF)	50 VOLT.	CAP. (pF)	50 VOLT.	CAP. (μF)	50 VOLT.
	PART No.		PART No.		PART No.		PART No.
0.5	1-101-837-00	22	1-102-959-00	150	1-101-361-00	0.001	1-102-074-00
0.75	1-101-586-00	24	1-102-960-00	160	1-101-367-00	0.0012	1-102-118-00
1.0	1-102-934-00	27	1-102-961-00	180	1-102-976-00	0.0015	1-102-119-00
1.5	1-101-576-00	30	1-102-962-00	200	1-102-977-00	0.0018	1-102-120-00
2.0	1-102-935-00	33	1-102-963-00	220	1-102-978-00	0.0022	1-102-121-00
3	1-102-936-00	36	1-102-964-00	240	1-102-979-00	0.0027	1-102-122-00
4	1-102-937-00	39	1-102-965-00	270	1-102-980-00	0.0033	1-102-123-00
5	1-102-942-00	43	1-102-966-00	300	1-102-981-00	0.0039	1-102-124-00
6	1-102-943-00	47	1-101-880-00	330	1-102-820-00	0.0047	1-102-125-00
7	1-102-944-00	51	1-101-882-00	360	1-102-821-00	0.0056	1-102-126-00
8	1-102-945-00	56	1-101-884-00	390	1-102-822-00	0.0068	1-102-127-00
9	1-102-946-00	62	1-101-886-00	430	1-102-823-00	0.0082	1-102-128-00
10	1-102-947-00	68	1-101-888-00	470	1-102-824-00	0.01	1-102-129-00
11	1-102-948-00	75	1-101-890-00	510	1-101-059-00	0.022	1-101-005-00
12	1-102-949-00	82	1-102-971-00	560	1-102-115-00	0.047	1-101-006-00
13	1-102-950-00	91	1-102-972-00	680	1-102-116-00		
15	1-102-951-00	100	1-102-973-00	820	1-102-117-00		
16	1-102-952-00	110	1-102-815-00				
18	1-102-953-00	120	1-102-816-00				
20	1-102-958-00	130	1-101-081-00				

0.001μF = 1,000pF

MYLAR CAPACITORS

					RATING						
CAP. (μF)	50 VOLT.	100 VOLT.	200 VOLT.	CAP. (μF)	50 VOLT.	150 VOLT.	200 VOLT.	CAP. (μF)	50 VOLT.	100 VOLT.	200 VOLT.
	PART No.	PART No.	PART No.		PART No.	PART No.	PART No.		PART No.	PART No.	PART No.
0.001	1-108-227-00	1-108-365-00	1-108-409-00	0.01	1-108-239-00	1-108-377-00	1-108-421-00	0.1	1-108-251-00	1-108-389-00	1-108-433-00
0.0012	1-108-351-00	1-108-366-00	1-108-410-00	0.012	1-108-357-00	1-108-378-00	1-108-422-00	0.12	1-108-363-00	1-108-390-00	1-108-434-00
0.0015	1-108-228-00	1-108-367-00	1-108-411-00	0.015	1-108-240-00	1-108-379-00	1-108-423-00	0.15	1-108-252-00	1-108-391-00	1-108-435-00
0.0018	1-108-352-00	1-108-368-00	1-108-412-00	0.018	1-108-358-00	1-108-380-00	1-108-424-00	0.18	1-108-364-00	1-108-392-00	1-108-436-00
0.0022	1-108-230-00	1-108-369-00	1-108-413-00	0.022	1-108-242-00	1-108-381-00	1-108-425-00	0.22	1-108-254-00	1-108-393-00	1-108-437-00
0.0027	1-108-353-00	1-108-370-00	1-108-414-00	0.027	1-108-359-00	1-108-382-00	1-108-426-00	0.27	1-108-854-00		
0.0033	1-108-232-00	1-108-371-00	1-108-415-00	0.033	1-108-244-00	1-108-383-00	1-108-427-00	0.33	1-108-855-00		
0.0039	1-108-354-00	1-108-372-00	1-108-416-00	0.039	1-108-360-00	1-108-384-00	1-108-428-00	0.39	1-108-856-00		
0.0047	1-108-234-00	1-108-373-00	1-108-417-00	0.047	1-108-246-00	1-108-385-00	1-108-429-00	0.47	1-108-857-00		
0.0056	1-108-355-00	1-108-374-00	1-108-418-00	0.056	1-108-361-00	1-108-386-00	1-108-430-00				
0.0068	1-108-237-00	1-108-375-00	1-108-419-00	0.068	1-108-249-00	1-108-387-00	1-108-431-00				
0.0082	1-108-356-00	1-108-376-00	1-108-420-00	0.082	1-108-362-00	1-108-388-00	1-108-432-00				

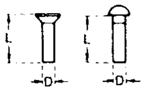
1/4 WATT CARBON RESISTORS

Ω	Part No.	Ω	Part No.	Ω	Part No.	Ω	Part No.	Ω	Part No.	Ω	Part No.	Ω	Part No.
1.0	1-246-401-00	10	1-246-425-00	100	1-246-449-00	1.0k	1-246-473-00	10k	1-246-497-00	100k	1-246-521-00	1.0M	1-246-545-00
1.1	1-246-402-00	11	1-246-426-00	110	1-246-450-00	1.1k	1-246-474-00	11k	1-246-498-00	110k	1-246-522-00	1.1M	1-210-814-00
1.2	1-246-403-00	12	1-246-427-00	120	1-246-451-00	1.2k	1-246-475-00	12k	1-246-499-00	120k	1-246-523-00	1.2M	1-210-815-00
1.3	1-246-404-00	13	1-246-428-00	130	1-246-452-00	1.3k	1-246-476-00	13k	1-246-500-00	130k	1-246-524-00	1.3M	1-210-816-00
1.5	1-246-405-00	15	1-246-429-00	150	1-246-453-00	1.5k	1-246-477-00	15k	1-246-501-00	150k	1-246-525-00	1.5M	1-210-817-00
1.6	1-246-406-00	16	1-246-430-00	160	1-246-454-00	1.6k	1-246-478-00	16k	1-246-502-00	160k	1-246-526-00	1.6M	1-210-818-00
1.8	1-246-407-00	18	1-246-431-00	180	1-246-455-00	1.8k	1-246-479-00	18k	1-246-503-00	180k	1-246-527-00	1.8M	1-210-819-00
2.0	1-246-408-00	20	1-246-432-00	200	1-246-456-00	2.0k	1-246-480-00	20k	1-246-504-00	200k	1-246-528-00	2.0M	1-210-820-00
2.2	1-246-409-00	22	1-246-433-00	220	1-246-457-00	2.2k	1-246-481-00	22k	1-246-505-00	220k	1-246-529-00	2.2M	1-210-821-00
2.4	1-246-410-00	24	1-246-434-00	240	1-246-458-00	2.4k	1-246-482-00	24k	1-246-506-00	240k	1-246-530-00	2.4M	1-244-754-00
2.7	1-246-411-00	27	1-246-435-00	270	1-246-459-00	2.7k	1-246-483-00	27k	1-246-507-00	270k	1-246-531-00	2.7M	1-244-755-00
3.0	1-246-412-00	30	1-246-436-00	300	1-246-460-00	3.0k	1-246-484-00	30k	1-246-508-00	300k	1-246-532-00	3.0M	1-244-756-00
3.3	1-246-413-00	33	1-246-437-00	330	1-246-461-00	3.3k	1-246-485-00	33k	1-246-509-00	330k	1-246-533-00	3.3M	1-244-757-00
3.6	1-246-414-00	36	1-246-438-00	360	1-246-462-00	3.6k	1-246-486-00	36k	1-246-510-00	360k	1-246-534-00	3.6M	1-244-758-00
3.9	1-246-415-00	39	1-246-439-00	390	1-246-463-00	3.9k	1-246-487-00	39k	1-246-511-00	390k	1-246-535-00	3.9M	1-244-759-00
4.3	1-246-416-00	43	1-246-440-00	430	1-246-464-00	4.3k	1-246-488-00	43k	1-246-512-00	430k	1-246-536-00	4.3M	1-244-760-00
4.7	1-246-417-00	47	1-246-441-00	470	1-246-465-00	4.7k	1-246-489-00	47k	1-246-513-00	470k	1-246-537-00	4.7M	1-244-761-00
5.1	1-246-418-00	51	1-246-442-00	510	1-246-466-00	5.1k	1-246-490-00	51k	1-246-514-00	510k	1-246-538-00	5.1M	1-244-762-00
5.6	1-246-419-00	56	1-246-443-00	560	1-246-467-00	5.6k	1-246-491-00	56k	1-246-515-00	560k	1-246-539-00		
6.2	1-246-420-00	62	1-246-444-00	620	1-246-468-00	6.2k	1-246-492-00	62k	1-246-516-00	620k	1-246-540-00		
6.8	1-246-421-00	68	1-246-445-00	680	1-246-469-00	6.8k	1-246-493-00	68k	1-246-517-00	680k	1-246-541-00		
7.5	1-246-422-00	75	1-246-446-00	750	1-246-470-00	7.5k	1-246-494-00	75k	1-246-518-00	750k	1-246-542-00		
8.2	1-246-423-00	82	1-246-447-00	820	1-246-471-00	8.2k	1-246-495-00	82k	1-246-519-00	820k	1-246-543-00		
9.1	1-246-424-00	91	1-246-448-00	910	1-246-472-00	9.1k	1-246-496-00	91k	1-246-520-00	910k	1-246-544-00		

HARDWARE NOMENCLATURE

Screw:

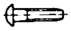
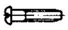
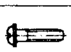
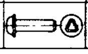
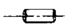
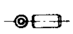
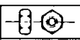
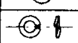
– P 3 x 10
L: Length in mm
D: Diameter in mm
Type of head
Indicated slotted-head only.
Unless otherwise indiceted, it means cross-recessed head (Phillips type).



Reference Designetion	Shape	Description	Remarks
		SCREWS	
P		pan-head screw	binding-head (B) screw for replacemant
PWH		pan-head screw with washer face	binding-head (B) screw and flat washer for replacement
PS PSP		pan-head screw with spring washer	binding-head (B) screw and spring washer for replacement
PSW PSPW		pan-head screw with spring and flat washers	binding-head (B) screw and spring and flat washers for replacement
R		round-head screw	binding-head (B) screw for replacement
K		flat-countersunk-head screw	
RK		oval-countersunk-head screw	
B		binding-head screw	
T		truss-head screw	binding-head (B) screw for replacement
F		flat-fillistar-head scraw	
RF		fillister-head screw	
BV		brazier-head screw	

Nut, Washer, Retaining ring:

N 3
Diameter of usahle screw or shaft
Reference designation

Reference Designation	Shape	Description	Remarks
		SELF-TAPPING SCREWS	
TA		self-tapping screw	ex: TA, P 3 x 10
PTP		pan-head self-tapping screw	binding-head self-tapping (TA, B) screw for replacement
PTPWH		pan-head self-tapping screw with washer face	binding-head self tapping (TA, B) screw and flat washer for replacement
PTTWH		pan-head thread-rolling screw with washer face	binding-head (B) screw and flat washer for replacement
		SET SCREWS	
SC		set screw	
SC		hexagon-socket set screw	ex: SC 2.6 x 4, hexagon socket
		NUT	
N		nut	
		WASHERS	
W		flat washer	
SW		spring washer	
LW		internal-tooth lock washer	ex: LW3, internal
LW		external-tooth lock washer	ex: LW3, external
		RETAINING RINGS	
E		retaining ring	
G		grip-type retaining ring	

Sony Corporation
TV & Camera Group

© 1982

9-972-144-~~02~~
03

82C0508-1
Printed in Japan

S. 15-142 [illegible]

SECTION 5
EXPLODED VIEWS

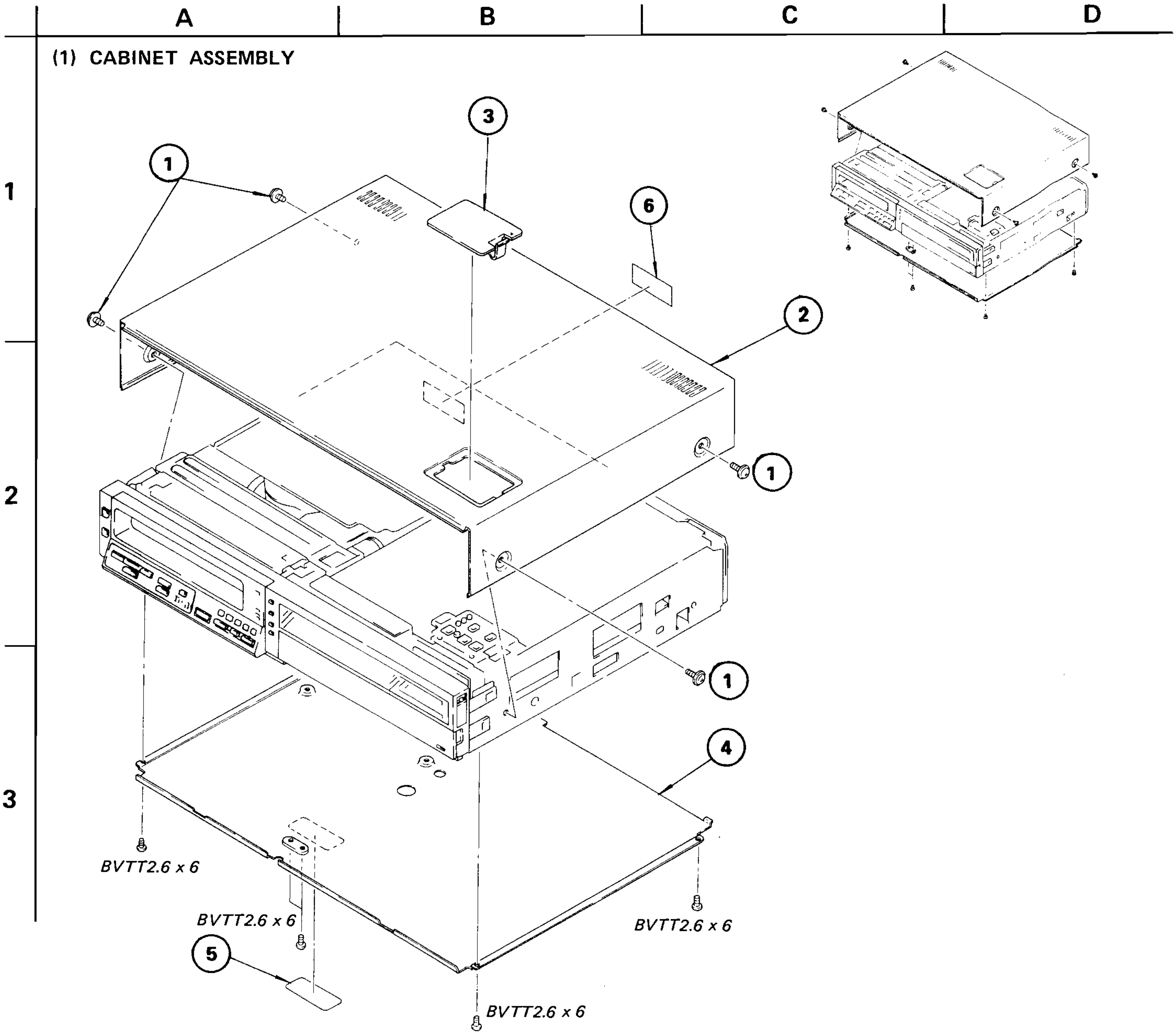
NOTE:
- Items with no part number and no description are not stocked because they are seldom required for routine service.
- The construction parts of an assembled part are indicated with a collation number in the remark column.
- As to the part numbered with E-, refer to the electrical parts list.
- Items marked " ♠ " are not stocked since they are seldom required for routine service. Some delay should be anticipated when ordering these items.

The components identified by shading and mark ⚠ are critical for safety.
Replace only with part number specified.

Les composants identifiés par une trame et une marque ⚠ sont critiques pour la sécurité.
Ne les remplacer que par une pièce portant le numéro spécifié.

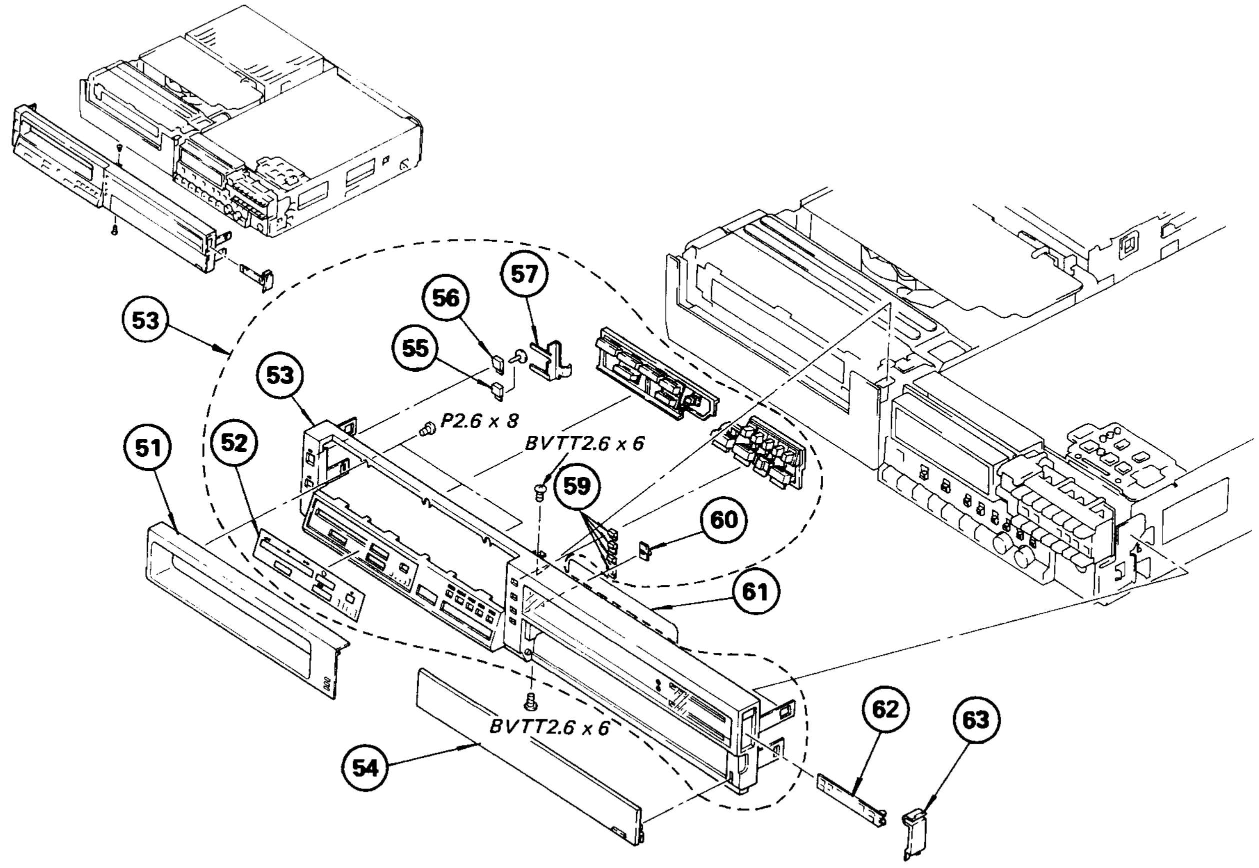
When indicating parts by reference number, please include the board name.

(1) CABINET ASSEMBLY



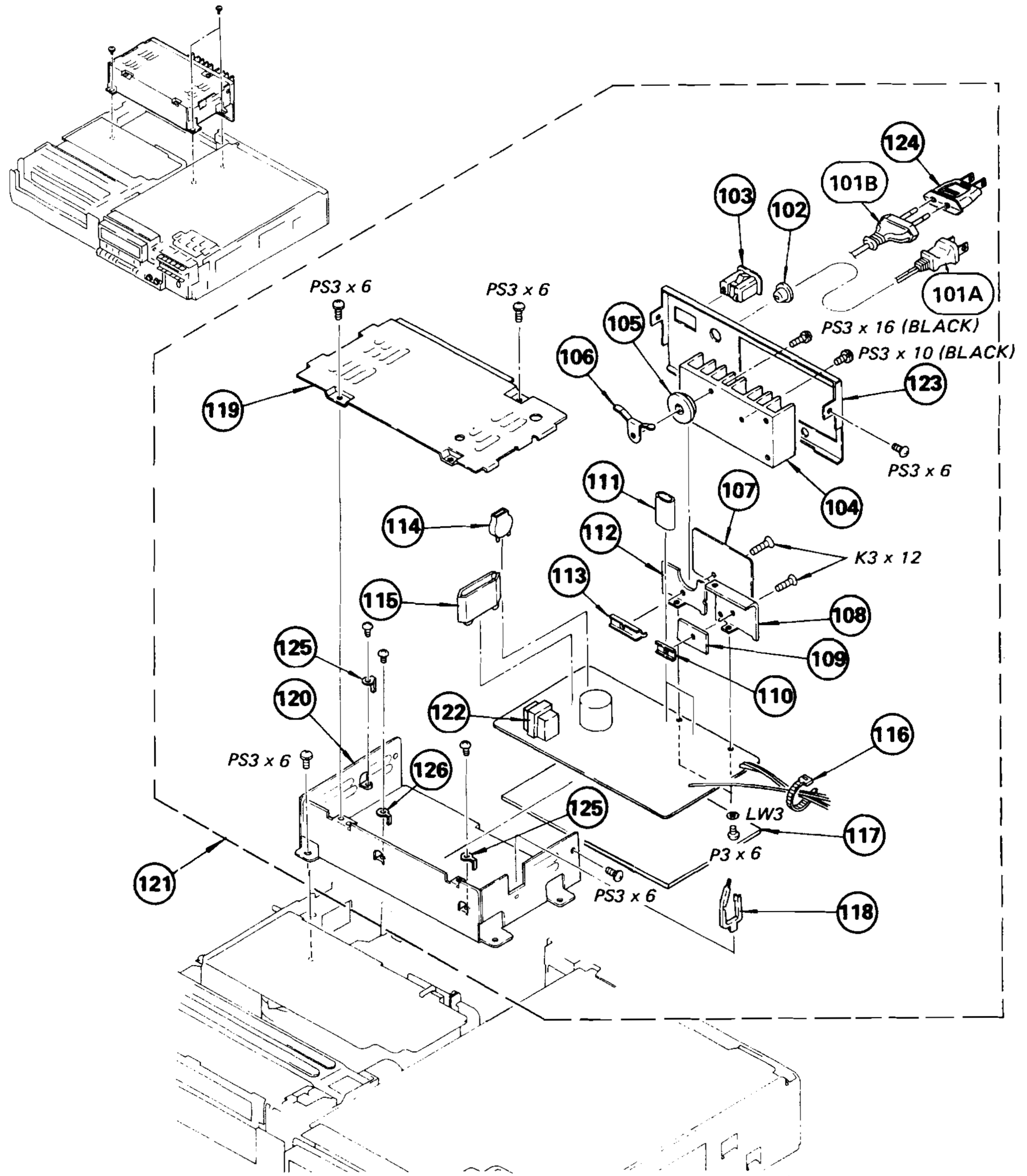
No.	Part No.	Description	Remark
1	3-703-354-11	SCREW (OS), CASE, CLAW	
2	X-3670-047-0	CASE ASSY (TYPE 1)	
2	X-3670-023-1	CASE ASSY (TYPE 2)	
3	4-342-123-00	DOOR, PRESET	
4	X-3670-039-0	PLATE ASSY, BOTTOM	5
5	3-703-043-21	LABEL, MAIN COUTION	
6	♠:3-671-881-00	LABEL, MODEL NUMBER (TYPE 1)	
6	♠:3-675-562-01	LABEL, MODEL NUMBER (TYPE 2)	

(2) FRONT ASSEMBLY


A
B
C
D
1
2
3
53
57
56
55
53
P2.6 x 8
BVTT2.6 x 6
51
52
59
60
61
62
63
BVTT2.6 x 6
54

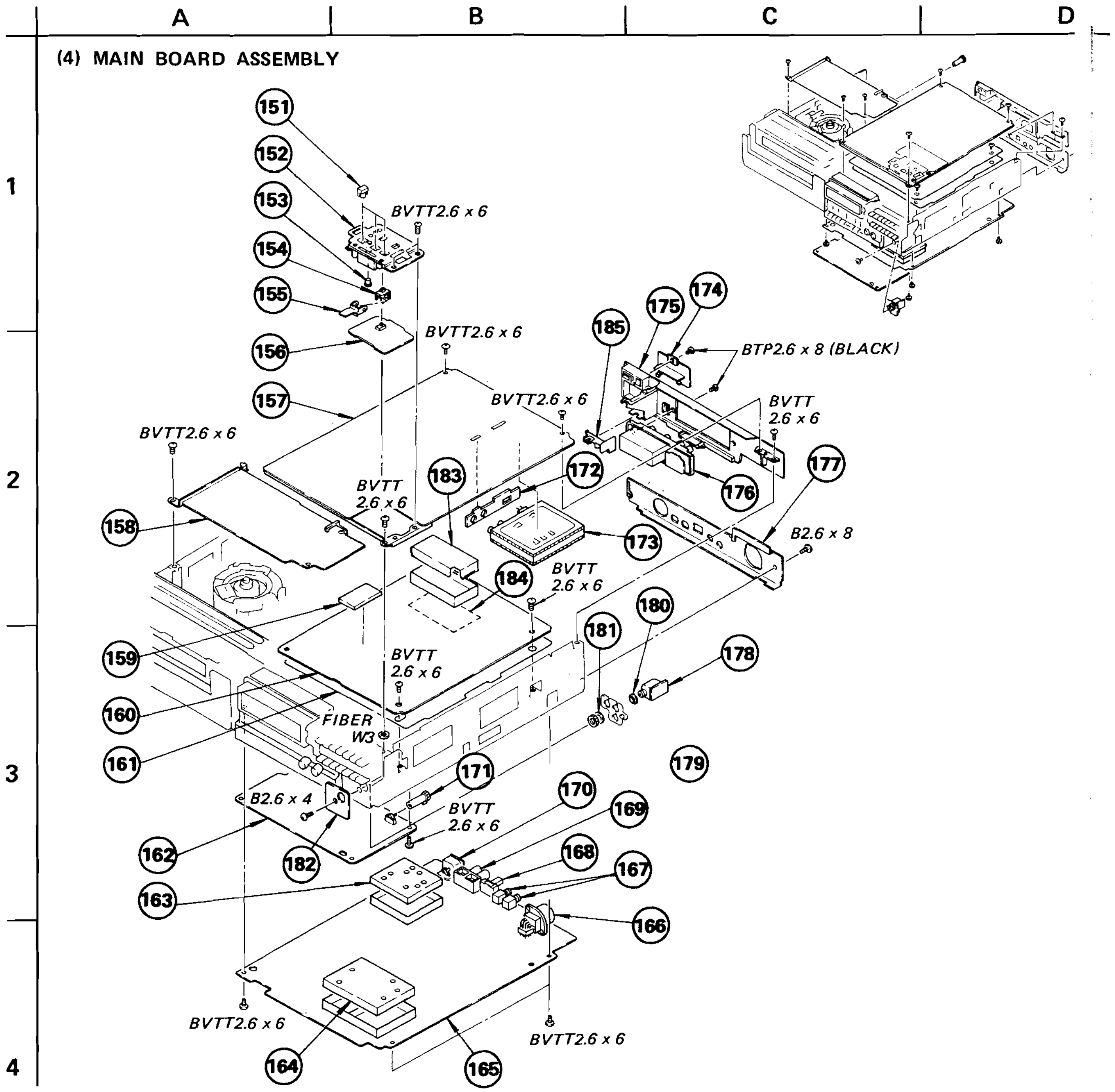
No.	Part No	Description	Remark	No.	Part No	Description	Remark
51	X-3670-038-0	GUIDE ASSY, ENTRANCE, CASSETTE					
52	3-670-176-00	PLATE, ORNAMENTAL, BUTTON, FU		59	3-670-074-00	BUTTON, COUNTER	
53	X-3670-054-0	PANEL ASSY, FRONT	52, 55–57. 59. 60	60	♠ :3-670-075-00	LED COVER, TIMER RECORD	
54	X-3670-050-0	DOOR ASSY, FRONT		61	3-671-861-00	COVER, TIMER	
55	3-670-082-11	BUTTON, PE		62	3-670-122-00	HOLDER, INDICATOR	
56	3-670-082-00	BUTTON, PE		63	3-670-087-00	FRONT (RIGHT)	
57	3-670-080-00	SPRING, LEAF (PE)					

(3) POWER ASSEMBLY


A
B
C
D
1
2
3
4
124
101B
103
102
101A
PS3 x 6
PS3 x 6
105
PS3 x 16 (BLACK)
106
PS3 x 10 (BLACK)
119
123
PS3 x 6
111
107
104
114
112
K3 x 12
113
115
108
125
109
110
120
122
116
PS3 x 6
126
125
LW3
117
P3 x 6
121
PS3 x 6
118

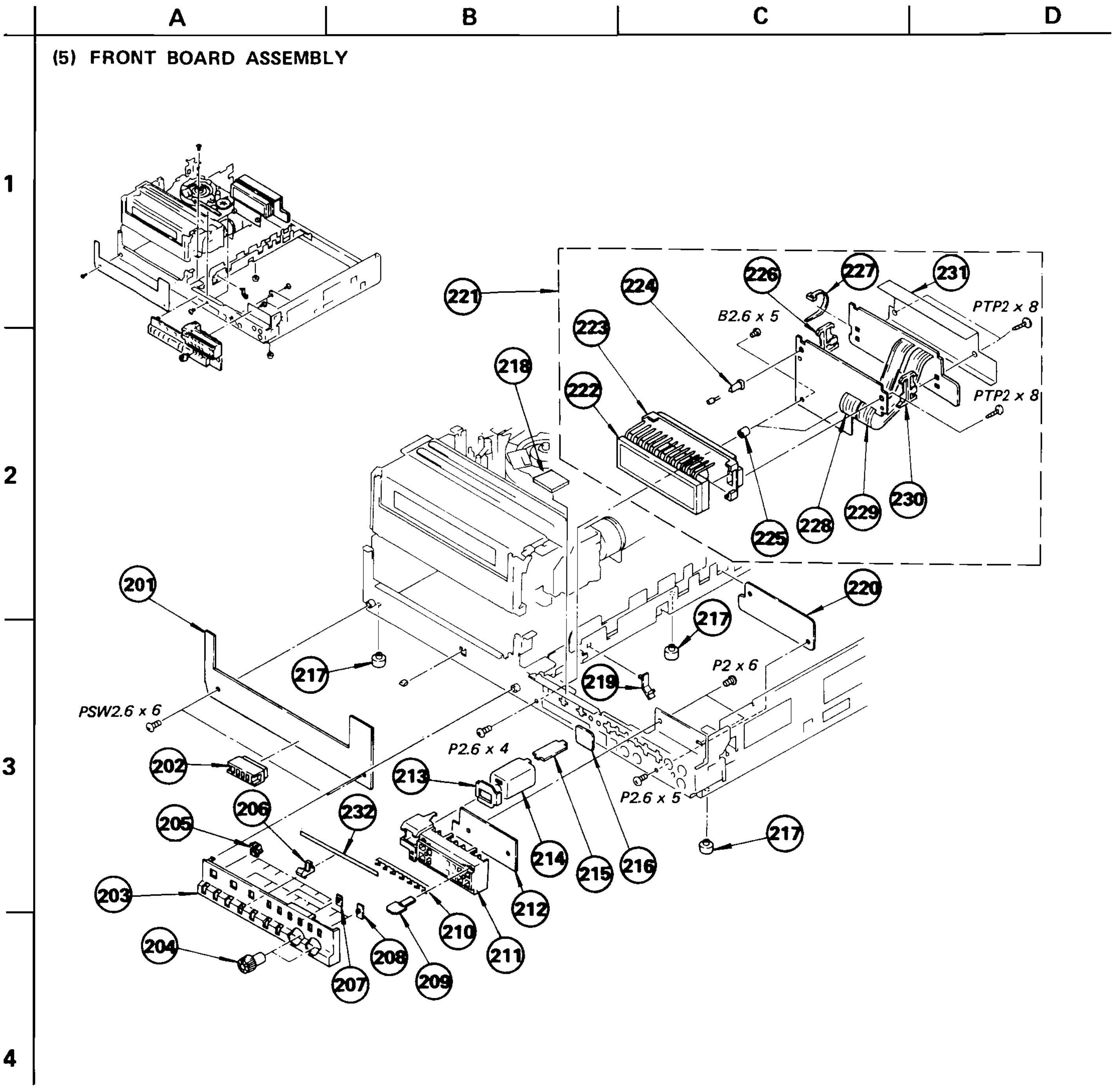
No.	Part No.	Description	Remark
101A	⚠.1-551-964-00	CORD, POWER (TYPE 1)	
101B	⚠.1-555-312-21	CORD, POWER (TYPE 2)	
102	⚠.2-231-019-00	GROMMET, STRAIN RELIEF (TYPE 1)	
102	⚠.3-663-213-01	RETAINER, CORD (TYPE 2)	
●103	⚠.1-561-347-00	SOCKET, AC (TYPE 1)	
104	●:9-982-200-00	HEAT SINK, FIN	
105	2-291-522-00	WASHER INSULATING	
106	●:9-982-213-00	BRACKET, UP	
107	9-982-204-00	SHEET, INSULATING (TYPE 1)	
108	●:9-982-202-00	HEAT SINK, SP	
109	9-982-203-00	SHEET, INSULATING (TYPE 1)	
110	●:9-982-021-00	RETAINER, SP	
111	2-291-517-00	SHEET INSULATING, UP TO, 3	
112	●:2-291-515-00	HEAT SINK, UP	
113	●:2-291-519-00	RETAINER, UP	
114	●:2-291-547-00	COVER, CAPACITOR	
115	●:4-316-137-00	COVER, CAPACITOR (TYPE 1)	
116	●:3-701-748-00	CLAMP, HARNESS	
117	●:9-982-208-00	PLATE, INSULATING (TYPE 1)	
118	●:4-316-015-00	CLAMP, HARNESS	
119	●:9-982-197-00	CASE, UPPER	
120	●:9-982-198-00	CASE, LOWER (TYPE 1)	
120	●:3-677-522-01	CASE, LOWER (TYPE 2)	
121	⚠.1-413-081-11	POWER BLOCK (SR-11A) 101, 102, 103, 104, 105, 106, 107, 108, 109, 110, 111, 112, 113, 114, 115, 116, 117, 118, 119, 120, 122, 123	(TYPE 1)
121	⚠.1-413-116-11	POWER BLOCK (SR-11PH) 101, 102, 104, 105, 106, 108, 110, 111, 112, 113, 114, 116, 118, 119, 120, 122, 123, 124, 125, 126	(TYPE 2)
122	⚠.1-447-197-00	TRANSFORMER, POWER (TYPE 1)	
122	⚠.1-446-932-00	TRANSFORMER, POWER (TYPE 2)	
123	●:9-982-265-00	PANEL, CASE (TYPE 1)	
123	●:3-677-520-01	PANEL (TYPE 2)	
124	⚠.1-506-409-00	ADAPTOR, CONVERSION (TYPE 2)	
125	●:9-982-214-01	LUG (A) (TYPE 2)	
126	●:9-982-215-01	LUG (B) (TYPE 2)	

(4) MAIN BOARD ASSEMBLY


A
B
C
D
1
2
3
4
151
152
153
154
155
156
157
158
159
160
161
162
163
164
165
166
167
168
169
170
171
172
173
174
175
176
177
178
179
180
181
182
183
184
185
BVTT2.6 x 6
BVTT2.6 x 6
BVTT2.6 x 6
BVTT2.6 x 6
BTP2.6 x 8 (BLACK)
BVTT
2.6 x 6
BVTT
2.6 x 6
BVTT
2.6 x 6
BVTT
2.6 x 6
B2.6 x 8
FIBER
W3
B2.6 x 4
BVTT
2.6 x 6
BVTT2.6 x 6
BVTT2.6 x 6

No.	Part No	Description	Remark
151	2-291-041-00	BUTTON (A), PRESET	
152	X-3670-025-0	PRESET ASSY	151,153
153	3-669-528-00	CAP, BUTTON	
154	3-670-148-00	KEY (P), SLIDE	
155	3-670-138-00	LEVER, RELEASE	
156	♠ :1-605-581-00	CH-21 BOARD	
157	♠ :A-6721-086-A	TU-21 BOARD, COMPLETE	
158	♠ :A-6717-236-A	RR-1A BOARD, COMPLETE	
159	♠ :1-606-231-00	MB-3 BOARD	
160	♠ :A-6715-131-A	SS-10A BOARD, COMPLETE	
161	♠ :3-670-123-00	INNER, INSULATOR	
162	♠ :A-6711-323-A	VL-3 BOARD, COMPLETE	
163	♠ :3-671-855-00	LID, CASE, SHIELD, VA-A	
164	♠ :3-671-852-00	LID, CASE, SHIELD, VA-V	
165	♠ :A-6711-314-A	VA-3Z BOARD, COMPLETE	
166	1-561-690-00	CONNECTOR, CAMERA 14P	
167	1-507-251-XX	JACK	
168	1-552-821-00	SWITCH, SLIDE	
169	1-507-742-00	JACK, PIN 2P	
170	1-561-703-00	CONNECTOR, DIN 8P	
171	3-670-149-00	KNOB, V SYNCHRONOUS	
172	♠ :1-605-575-00	TU-22 BOARD	
173	1-463-377-00	TUNER (BT-864)	
174	2-291-019-00	LID, BOOSTER	
175	3-670-160-11	PANEL (UPPER), REAR	
176	1-536-672-41	TERMINAL BOARD (WITH ANT SW)	
177	3-671-808-03	PANEL (LOWER), REAR	
178	♠ :1-606-272-00	MI-2 BOARD	
179	1-507-285-00	JACK	
180	3-670-164-00	SPACER, JACK	
181	3-701-444-11	WASHER, 6	
182	♠ :3-670-171-00	PLATE (SMALL), ORNAMENTAL	
183	♠ :X-3670-043-0	LID ASSY, SS-10 SHIELD CASE	
184	♠ :X-3670-042-0	LID ASSY, REAR, SHIELD CASE	
185	♠ :3-671-857-00	PLATE, GROUND	

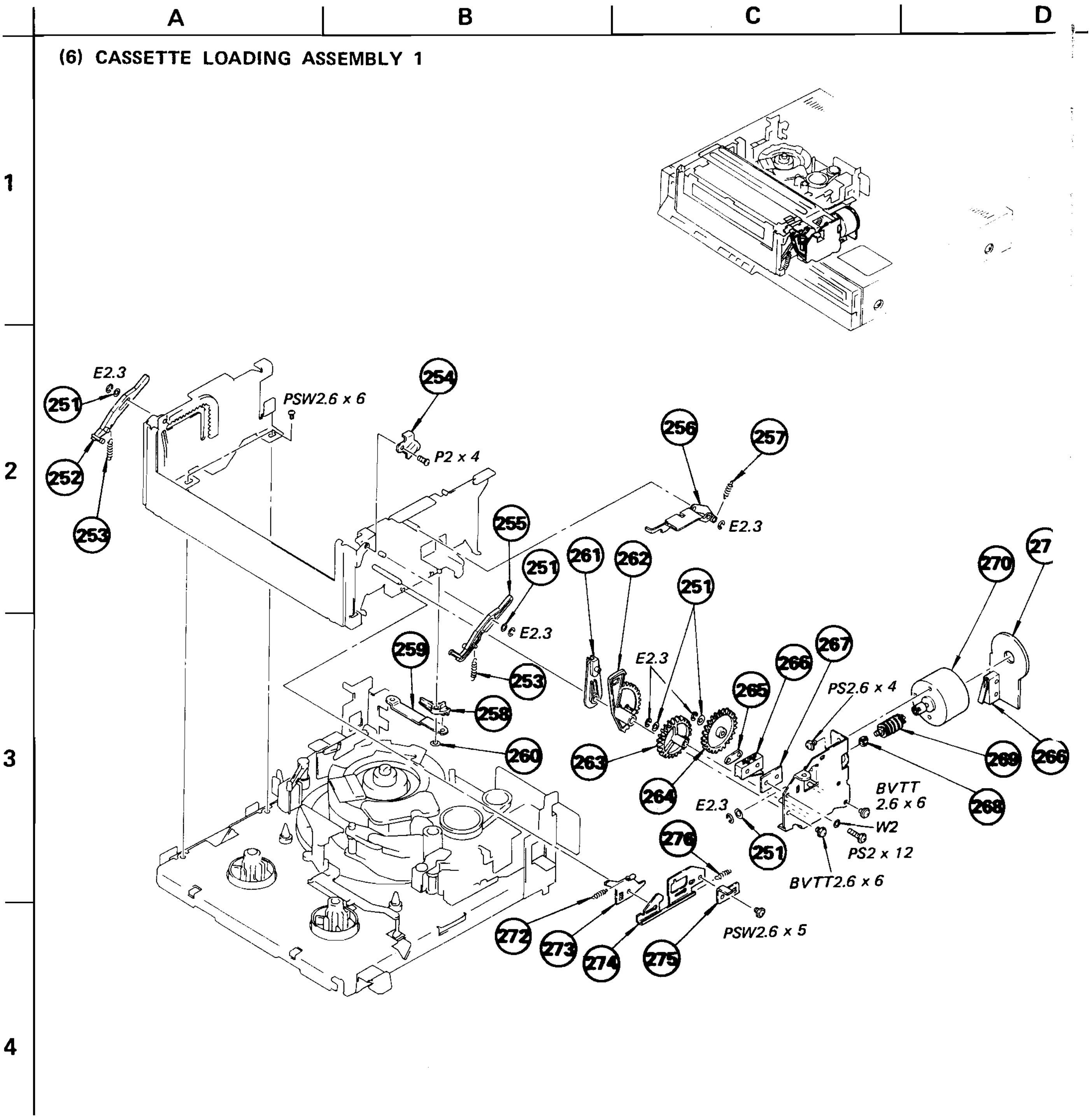
(5) FRONT BOARD ASSEMBLY


A
B
C
D
1
2
3
4
221
224
226
227
231
B2.6 x 5
PTP2 x 8
223
218
222
PTP2 x 8
225
228
229
230
201
220
217
P2 x 6
217
219
PSW2.6 x 6
P2.6 x 4
202
213
P2.6 x 5
217
205
206
232
214
215
216
203
212
210
211
204
208
207
209

No.	Part No	Description	Remark
201	♠ :A-6717-225-A	FU-3 BOARD, COMPLETE	
202	♠ :3-670-094-00	HOLDER, LED, 6 GANG	
203	X-3670-051-0	PANEL ASSY, SUB, FRONT	
204	3-670-093-00	KNOB, TRACK CONTROL	
205	3-670-091-00	KEY (B), TACT	
206	3-670-090-00	KEY (A), TACT	
207	3-670-089-00	KEY (B), SLIDE	
208	3-670-088-00	KEY (A), SLIDE	
209	2-291-024-00	BUTTON, TUNER	
210	♠ :2-291-025-00	SPRING, LEAF	
211	3-670-159-00	FRAME, TUNER	
212	♠ :1-605-895-00	CH-22 BOARD	
213	♠ :3-671-831-00	COVER, RAY CATCHER BLOCK	
214	♠ :4-342-117-00	CASE, SHIELD (MAIN), R	
215	♠ :1-603-976-00	N BOARD	
216	♠ :4-342-118-00	LID, SHIELD CASE, R	
217	3-670-155-00	LEG	

No.	Part No.	Description	Remark
218	♠ :3-675-599-01	SPACER, TIMER	
219	♠ :3-701-832-00	HINGE, CIRCUIT BOARD	
220	♠ :1-605-410-00	SW-12 BOARD	
221	1-548-552-12	TIMER BLOCK (TYPE 1)	{ 222, 223, 224, 225, 226, 227, 228, 229, 230, 231
221	1-548-552-21	TIMER BLOCK (TYPE 2)	
222	♠ :9-982-255-00	FLUORESCENT DISPLAY	
223	♠ :9-982-256-00	HOLDER, INDICATION TUBE	
224	♠ :9-982-259-00	HOLDER, LED	
225	♠ :9-982-257-00	SPACER, PC BOARD	
226	♠ :9-982-245-00	HOLDER, PC BOARD	
227	3-701-748-00	CLAMP, HARNESS	
228	♠ :9-982-061-00	CABLE, RIBBON 9P	
229	♠ :9-982-260-00	CABLE, RIBBON 10P	
230	♠ :9-982-254-00	HOLDER, PC BOARD	
231	♠ :9-982-253-00	CASE ASS'Y SHIELD	
232	♠ :3-671-865-00	CUSHION, BUTTON	

(6) CASSETTE LOADING ASSEMBLY 1


A
B
C
D
1
2
3
4
251
E2.3
252
253
PSW2.6 x 6
254
P2 x 4
256
257
E2.3
255
251
E2.3
261
262
251
270
27
259
253
E2.3
267
266
258
265
PS2.6 x 4
260
263
264
269
266
E2.3
251
BVTT
2.6 x 6
268
W2
PS2 x 12
276
BVTT2.6 x 6
272
273
274
275
PSW2.6 x 5

No.	Part No	Description	Remark
251	3-701-439-21	WASHER	
252	3-670-056-00	ARM (L), DOOR	
253	3-500-130-00	SPRING, TENSION	
254	♠ :3-671-819-00	COVER, SECTOR GEAR	
255	3-670-057-00	ARM (R), DOOR	
256	♠ :3-670-152-00	ARM, LOCK, UP	
257	3-536-767-XX	SPRING, TENSION	
258	3-670-001-00	LEVER, UNLOCK	
259	3-670-034-00	JOINT, UNLOCK	
260	3-669-465-00	WASHER (1.5), STOPPER	
261	3-670-136-00	ARM, HOLDER DRIVING	
262	3-670-151-00	GEAR, SECTOR	
263	3-670-016-00	GEAR (A)	
264	♠ :3-670-015-00	WHEEL, WORM	
265	♠ :3-646-476-00	NUT, PLATE	
266	1-552-664-00	SWITCH, MICRO	
267	3-534-263-00	INSULATOR	
268	♠ :3-670-168-00	BEARING, WORM	
269	X-3670-001-0	WORM ASSY	
270	X-3670-002-0	MOTOR ASSY, FL	
271	♠ :A-6728-246-A	LM-9 BOARD, COMPLETE	
272	3-530-248-XX	SPRING, TENSION	
273	♠ :3-670-010-00	STOPPER, LOCK	
274	♠ :3-670-009-00	PLATE, LOCK	
275	♠ :3-670-011-00	PLATE, ADJUSTMENT, CD	
276	3-630-615-XX	SPRING, TENSION	

SECTION 5
EXPLODED VIEWS

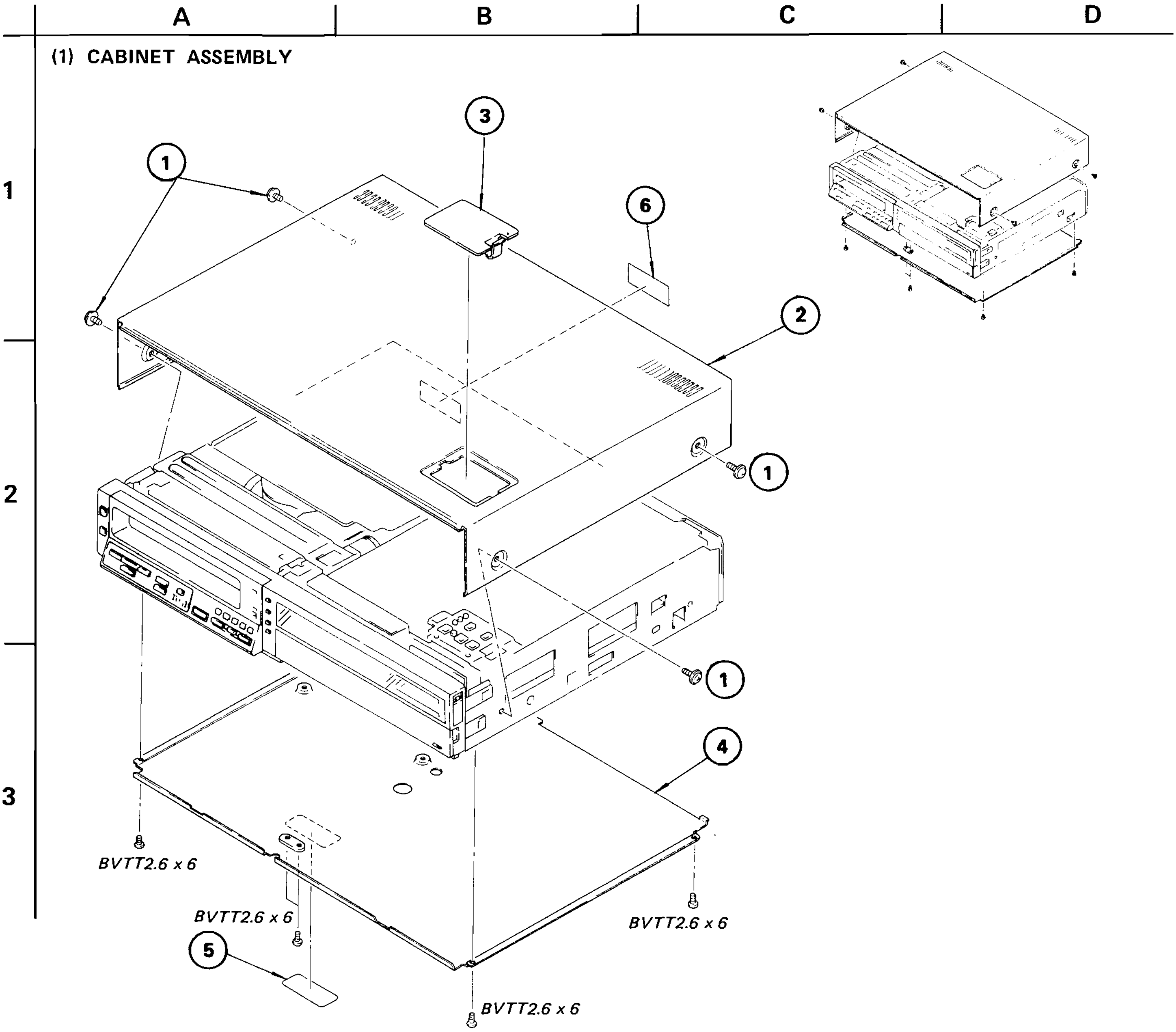
NOTE:
- Items with no part number and no description are not stocked because they are seldom required for routine service.
- The construction parts of an assembled part are indicated with a collation number in the remark column.
- As to the part numbered with E-, refer to the electrical parts list.
- Items marked " ♠ " are not stocked since they are seldom required for routine service. Some delay should be anticipated when ordering these items.

When indicating parts by reference number, please include the board name.

The components identified by shading and mark ⚠ are critical for safety. Replace only with part number specified.

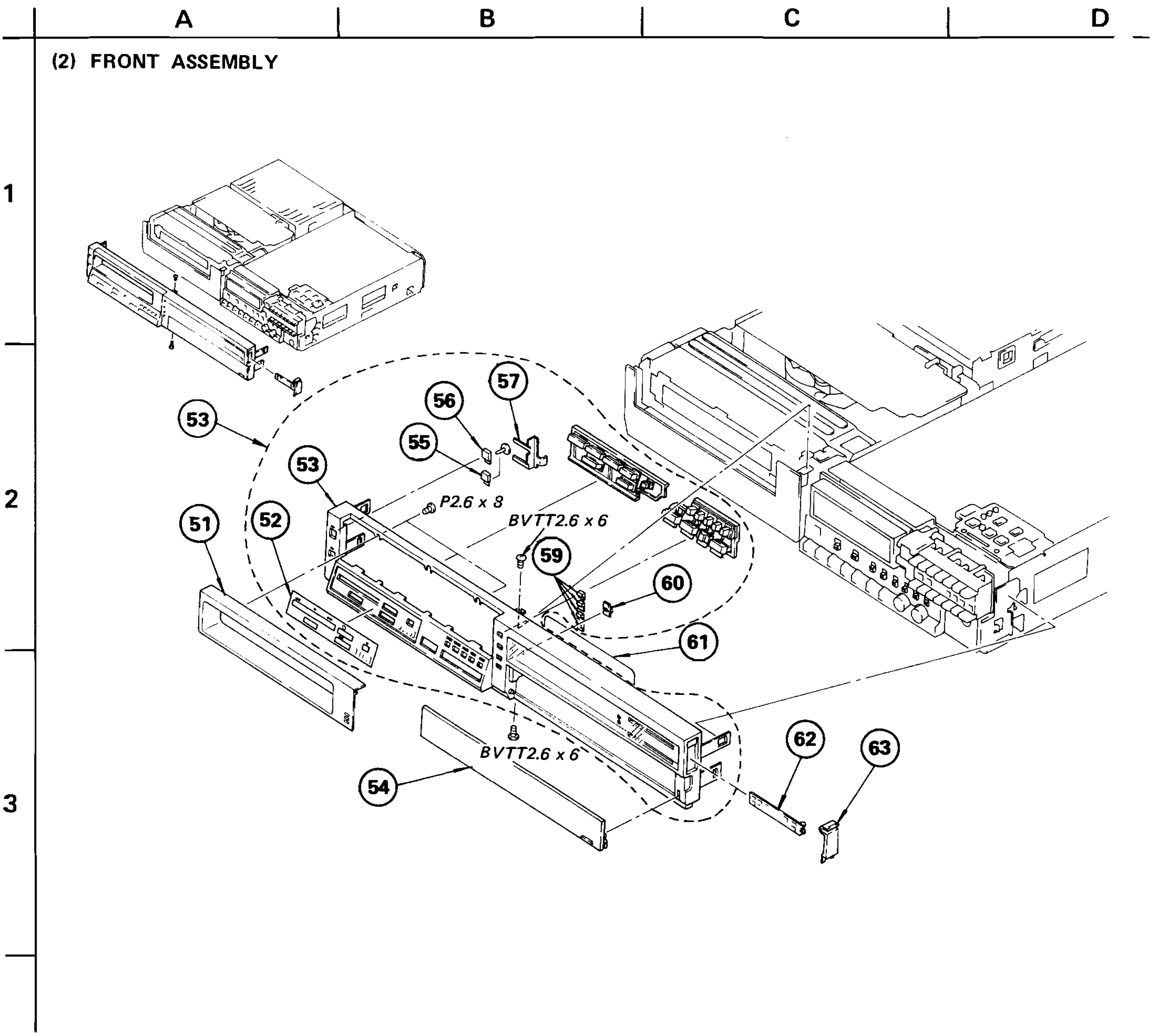
Les composants identifiés par une trame et une marque ⚠ sont critiques pour la sécurité. Ne les remplacer que par une pièce portant le numéro spécifié.

(1) CABINET ASSEMBLY



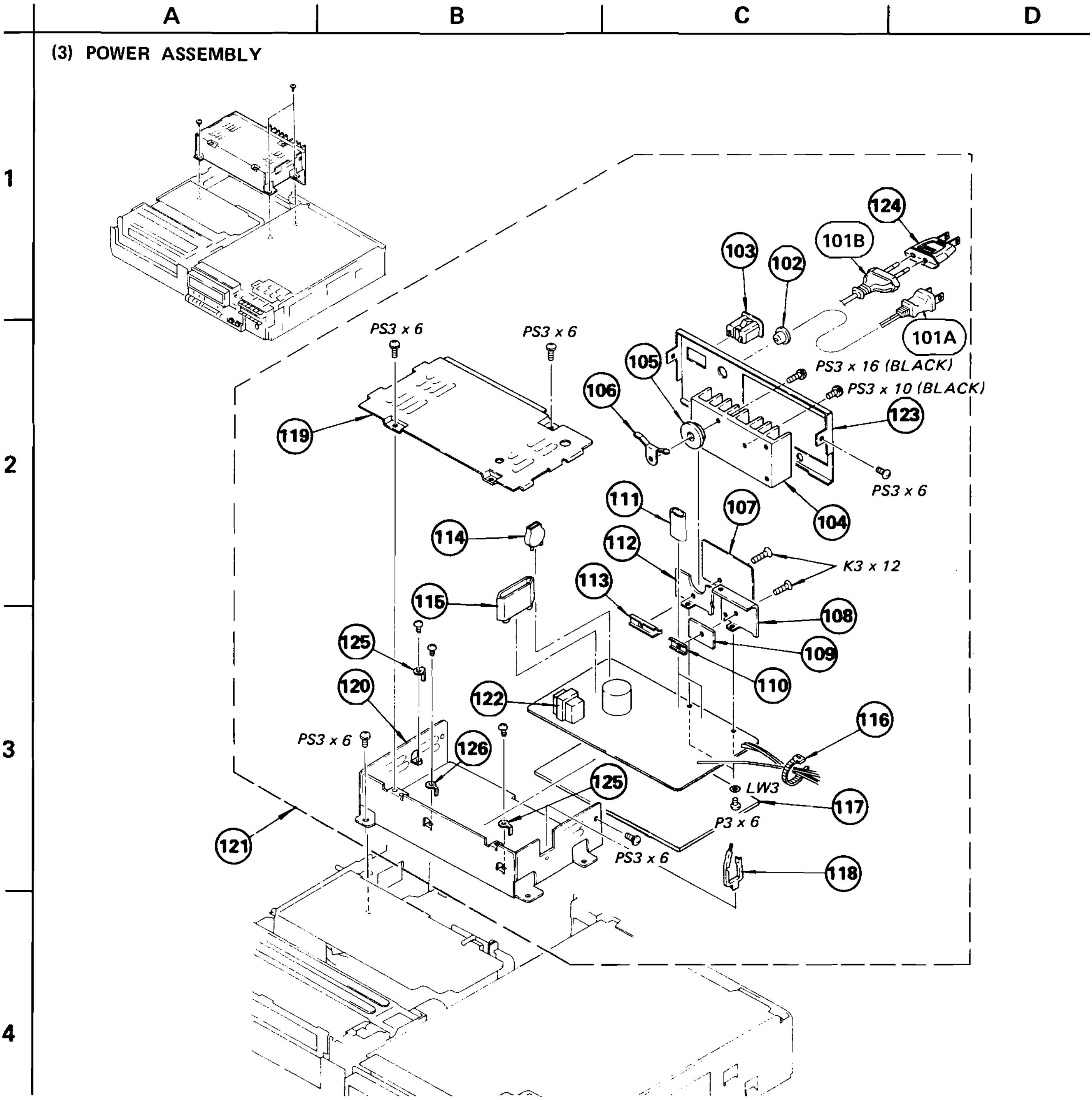
No.	Part No.	Description	Remark
1	3-703-354-11	SCREW (OS), CASE, CLAW	
2	X-3670-047-0	CASE ASSY (TYPE 1)	
2	X-3670-023-1	CASE ASSY (TYPE 2)	
3	4-342-123-00	DOOR, PRESET	
4	X-3670-039-0	PLATE ASSY, BOTTOM	5
5	3-703-043-21	LABEL, MAIN COUTION	
6	♠:3-671-881-00	LABEL, MODEL NUMBER (TYPE 1)	
6	♠:3-675-562-01	LABEL, MODEL NUMBER (TYPE 2)	

(2) FRONT ASSEMBLY


A
B
C
D
1
2
3
53
57
56
55
53
P2.6 x 8
BVTT2.6 x 6
51
52
59
60
61
62
63
BVTT2.6 x 6
54

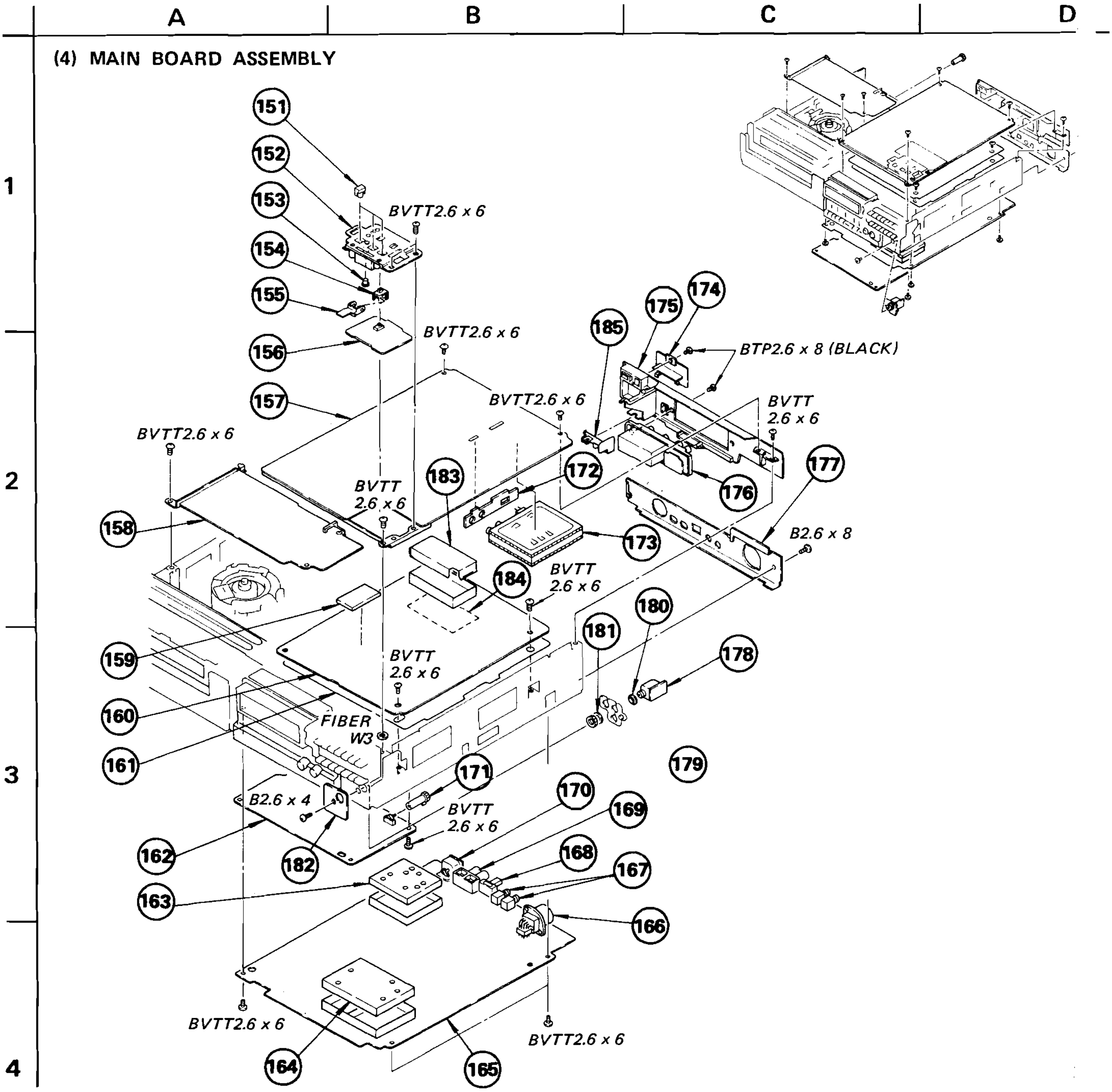
No.	Part No	Description	Remark
51	X-3670-038-0	GUIDE ASSY, ENTRANCE, CASSETTE	
52	3-670-176-00	PLATE, ORNAMENTAL, BUTTON, FU	
53	X-3670-054-0	PANEL ASSY, FRONT 52, 55—57. 59. 60	
54	X-3670-050-0	DOOR ASSY, FRONT	
55	3-670-082-11	BUTTON, PE	
56	3-670-082-00	BUTTON, PE	
57	3-670-080-00	SPRING, LEAF (PE)	
59	3-670-074-00	BUTTON, COUNTER	
60	▲ :3-670-075-00	LED COVER, TIMER RECORD	
61	3-671-861-00	COVER, TIMER	
62	3-670-122-00	HOLDER, INDICATOR	
63	3-670-087-00	FRONT (RIGHT)	

(3) POWER ASSEMBLY


A
B
C
D
1
2
3
4
124
101B
103
102
101A
PS3 x 6
PS3 x 6
105
PS3 x 16 (BLACK)
PS3 x 10 (BLACK)
106
123
119
PS3 x 6
111
107
104
114
112
K3 x 12
113
115
108
125
109
120
122
110
116
PS3 x 6
126
125
LW3
117
P3 x 6
121
PS3 x 6
118

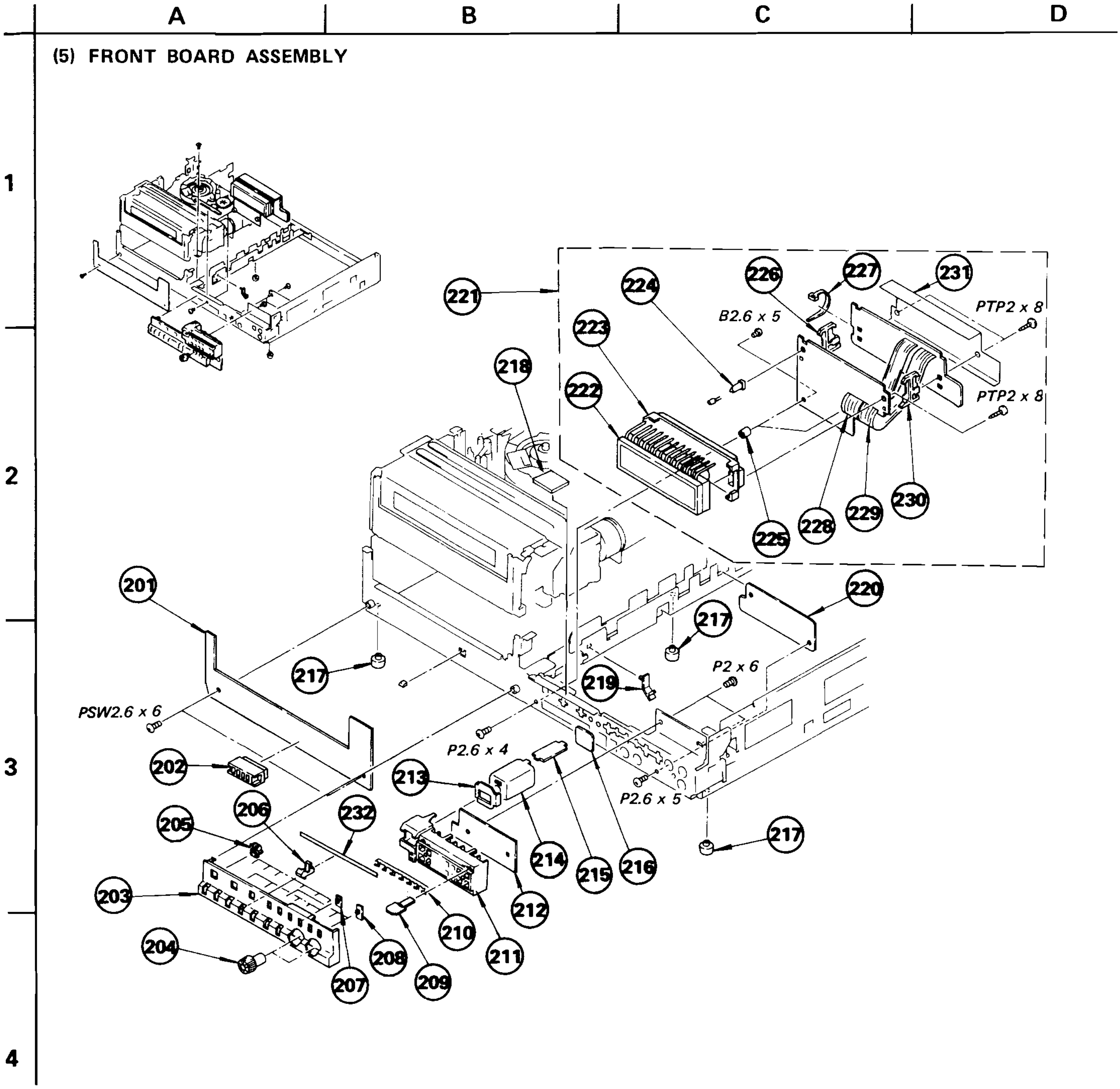
No.	Part No.	Description	Remark
101A	⚠.1-551-964-00	CORD, POWER (TYPE 1)	
101B	⚠.1-555-312-21	CORD, POWER (TYPE 2)	
102	⚠.2-231-019-00	GROMMET, STRAIN RELIEF (TYPE 1)	
102	⚠.3-663-213-01	RETAINER, CORD (TYPE 2)	
●103	⚠.1-561-347-00	SOCKET, AC (TYPE 1)	
104	●:9-982-200-00	HEAT SINK, FIN	
105	2-291-522-00	WASHER INSULATING	
106	●:9-982-213-00	BRACKET, UP	
107	9-982-204-00	SHEET, INSULATING (TYPE 1)	
108	●:9-982-202-00	HEAT SINK, SP	
109	9-982-203-00	SHEET, INSULATING (TYPE 1)	
110	●:9-982-021-00	RETAINER, SP	
111	2-291-517-00	SHEET INSULATING, UP TO, 3	
112	●:2-291-515-00	HEAT SINK, UP	
113	●:2-291-519-00	RETAINER, UP	
114	●:2-291-547-00	COVER, CAPACITOR	
115	●:4-316-137-00	COVER, CAPACITOR (TYPE 1)	
116	●:3-701-748-00	CLAMP, HARNESS	
117	●:9-982-208-00	PLATE, INSULATING (TYPE 1)	
118	●:4-316-015-00	CLAMP, HARNESS	
119	●:9-982-197-00	CASE, UPPER	
120	●:9-982-198-00	CASE, LOWER (TYPE 1)	
120	●:3-677-522-01	CASE, LOWER (TYPE 2)	
121	⚠.1-413-081-11	POWER BLOCK (SR-11A) 101, 102, 103, 104, 105, 106, 107, 108, 109, 110, 111, 112, 113, 114, 115, 116, 117, 118, 119, 120, 122, 123	(TYPE 1)
121	⚠.1-413-116-11	POWER BLOCK (SR-11PH) 101, 102, 104, 105, 106, 108, 110, 111, 112, 113, 114, 116, 118, 119, 120, 122, 123, 124, 125, 126	(TYPE 2)
122	⚠.1-447-197-00	TRANSFORMER, POWER (TYPE 1)	
122	⚠.1-446-932-00	TRANSFORMER, POWER (TYPE 2)	
123	●:9-982-265-00	PANEL, CASE (TYPE 1)	
123	●:3-677-520-01	PANEL (TYPE 2)	
124	⚠.1-506-409-00	ADAPTOR, CONVERSION (TYPE 2)	
125	●:9-982-214-01	LUG (A) (TYPE 2)	
126	●:9-982-215-01	LUG (B) (TYPE 2)	

(4) MAIN BOARD ASSEMBLY


A
B
C
D
1
2
3
4
151
152
153
154
155
156
157
158
159
160
161
162
163
164
165
166
167
168
169
170
171
172
173
174
175
176
177
178
179
180
181
182
183
184
185
BVTT2.6 x 6
BVTT2.6 x 6
BVTT2.6 x 6
BVTT2.6 x 6
BVTT 2.6 x 6
BVTT 2.6 x 6
BVTT 2.6 x 6
BVTT 2.6 x 6
BVTT 2.6 x 6
BVTT2.6 x 6
BVTT2.6 x 6
BTP2.6 x 8 (BLACK)
B2.6 x 8
B2.6 x 4
FIBER W3

No.	Part No	Description	Remark
151	2-291-041-00	BUTTON (A), PRESET	
152	X-3670-025-0	PRESET ASSY	151,153
153	3-669-528-00	CAP, BUTTON	
154	3-670-148-00	KEY (P), SLIDE	
155	3-670-138-00	LEVER, RELEASE	
156	.▲ :1-605-581-00	CH-21 BOARD	
157	▲ :A-6721-086-A	TU-21 BOARD, COMPLETE	
158	▲ :A-6717-236-A	RR-1A BOARD, COMPLETE	
159	▲ :1-606-231-00	MB-3 BOARD	
160	▲ :A-6715-131-A	SS-10A BOARD, COMPLETE	
161	▲ :3-670-123-00	INNER, INSULATOR	
162	▲ :A-6711-323-A	VL-3 BOARD, COMPLETE	
163	▲ :3-671-855-00	LID, CASE, SHIELD, VA-A	
164	▲ :3-671-852-00	LID, CASE, SHIELD, VA-V	
165	▲ :A-6711-314-A	VA-3Z BOARD, COMPLETE	
166	1-561-690-00	CONNECTOR, CAMERA 14P	
167	1-507-251-XX	JACK	
168	1-552-821-00	SWITCH, SLIDE	
169	1-507-742-00	JACK, PIN 2P	
170	1-561-703-00	CONNECTOR, DIN 8P	
171	3-670-149-00	KNOB, V SYNCHRONOUS	
172	▲ :1-605-575-00	TU-22 BOARD	
173	1-463-377-00	TUNER (BT-864)	
174	2-291-019-00	LID, BOOSTER	
175	3-670-160-11	PANEL (UPPER), REAR	
176	1-536-672-41	TERMINAL BOARD (WITH ANT SW)	
177	3-671-808-03	PANEL (LOWER), REAR	
178	▲ :1-606-272-00	MI-2 BOARD	
179	1-507-285-00	JACK	
180	3-670-164-00	SPACER, JACK	
181	3-701-444-11	WASHER, 6	
182	▲ :3-670-171-00	PLATE (SMALL), ORNAMENTAL	
183	▲ :X-3670-043-0	LID ASSY, SS-10 SHIELD CASE	
184	▲ :X-3670-042-0	LID ASSY, REAR, SHIELD CASE	
185	▲ :3-671-857-00	PLATE, GROUND	

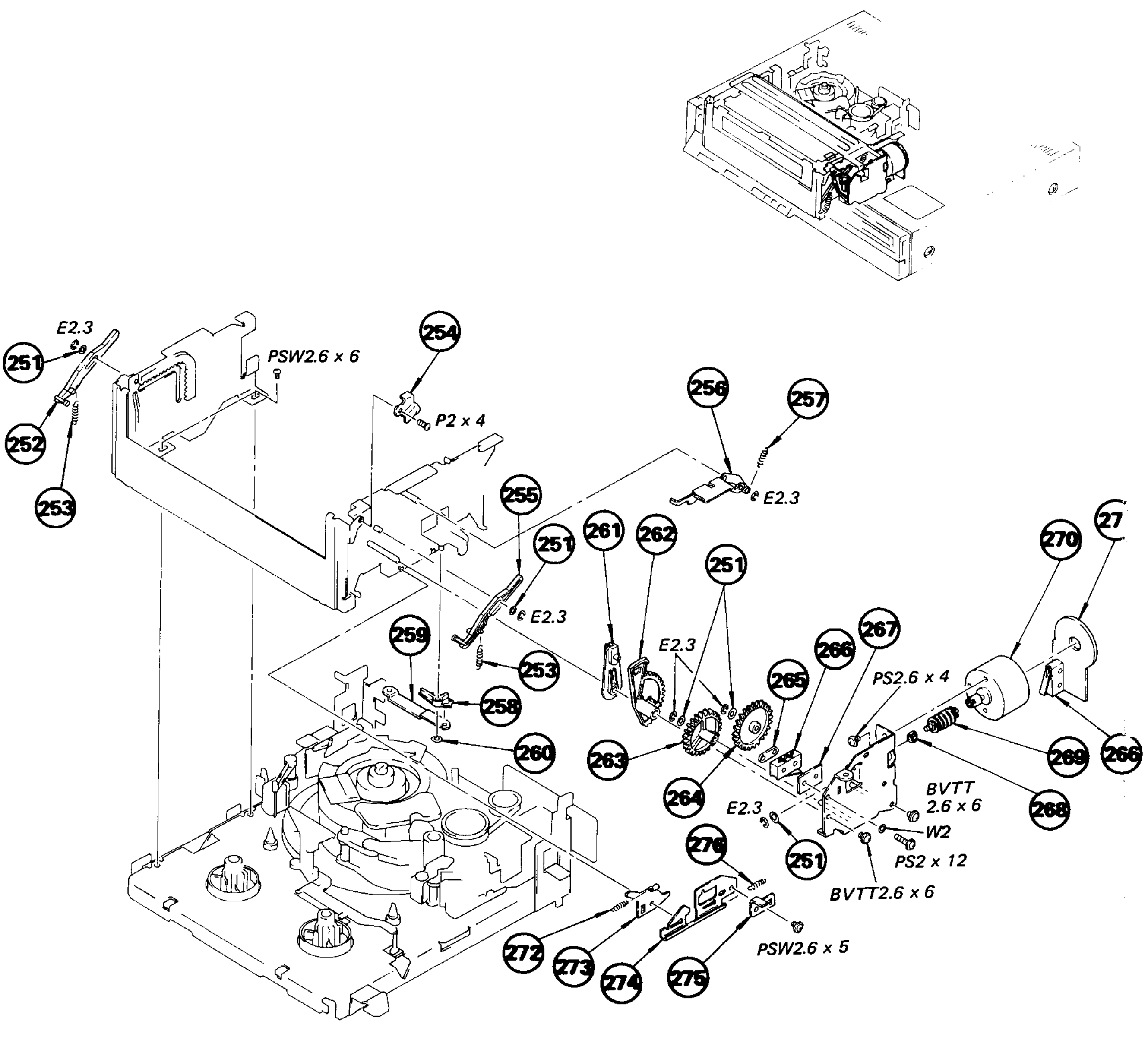
(5) FRONT BOARD ASSEMBLY


A
B
C
D
1
2
3
4
221
224
226
227
231
B2.6 x 5
PTP2 x 8
223
218
222
PTP2 x 8
225
228
229
230
201
220
217
217
P2 x 6
219
PSW2.6 x 6
P2.6 x 4
202
213
P2.6 x 5
206
232
217
205
214
215
216
203
212
210
204
208
211
207
209

No.	Part No	Description	Remark
201	♠ :A-6717-225-A	FU-3 BOARD, COMPLETE	
202	♠ :3-670-094-00	HOLDER, LED, 6 GANG	
203	X-3670-051-0	PANEL ASSY, SUB, FRONT	
204	3-670-093-00	KNOB, TRACK CONTROL	
205	3-670-091-00	KEY (B), TACT	
206	3-670-090-00	KEY (A), TACT	
207	3-670-089-00	KEY (B), SLIDE	
208	3-670-088-00	KEY (A), SLIDE	
209	2-291-024-00	BUTTON, TUNER	
210	♠ :2-291-025-00	SPRING, LEAF	
211	3-670-159-00	FRAME, TUNER	
212	♠ :1-605-895-00	CH-22 BOARD	
213	♠ :3-671-831-00	COVER, RAY CATCHER BLOCK	
214	♠ :4-342-117-00	CASE, SHIELD (MAIN), R	
215	♠ :1-603-976-00	N BOARD	
216	♠ :4-342-118-00	LID, SHIELD CASE, R	
217	3-670-155-00	LEG	

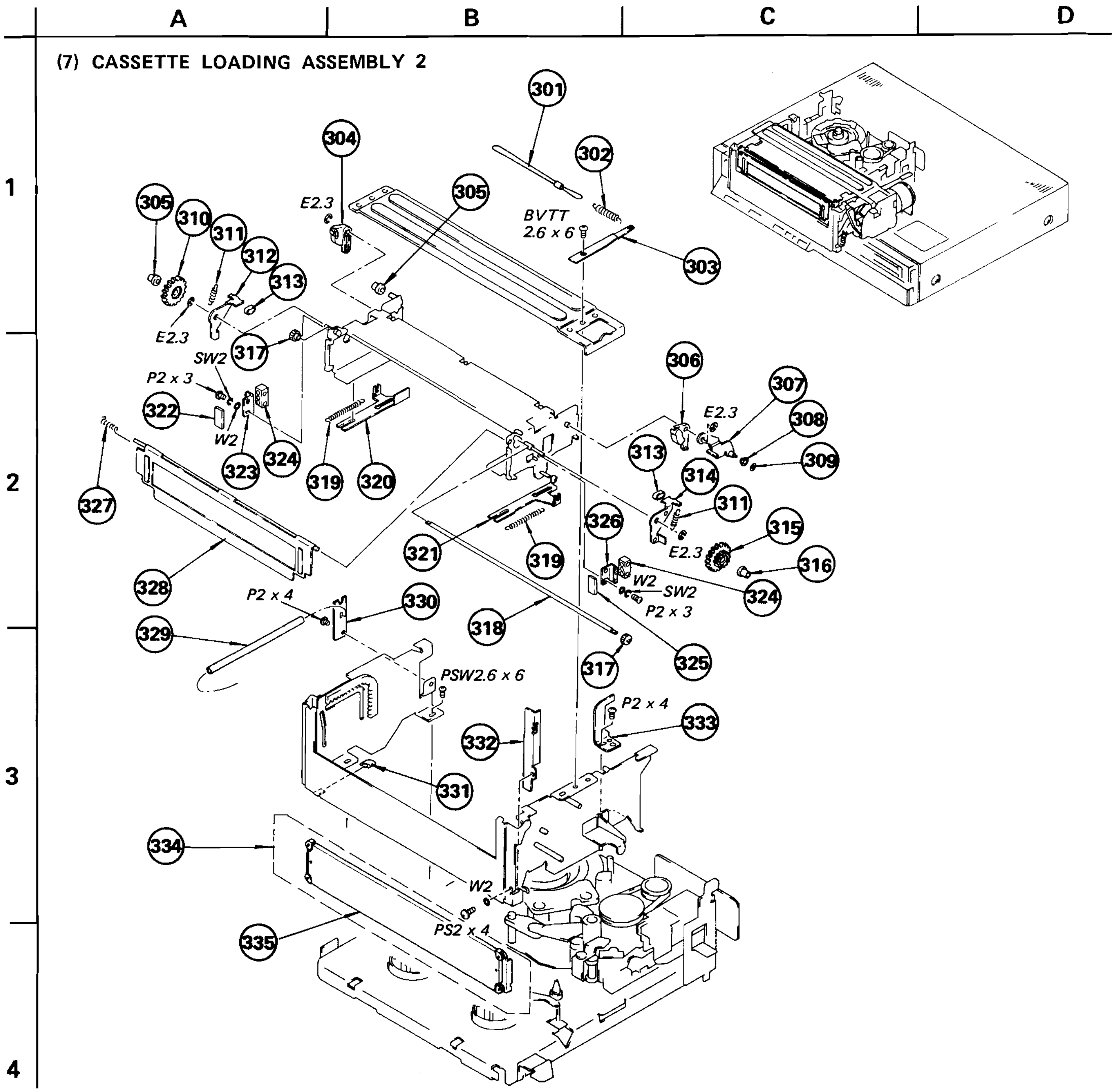
No.	Part No.	Description	Remark
218	♠:3-675-599-01	SPACER, TIMER	
219	♠:3-701-832-00	HINGE, CIRCUIT BOARD	
220	♠:1-605-410-00	SW-12 BOARD	
221	1-548-552-12	TIMER BLOCK (TYPE 1)	222, 223, 224, 225, 226, 227, 228, 229, 230, 231
221	1-548-552-21	TIMER BLOCK (TYPE 2)	
222	♠ :9-982-255-00	FLUORESCENT DISPLAY	
223	♠ :9-982-256-00	HOLDER, INDICATION TUBE	
224	♠ :9-982-259-00	HOLDER, LED	
225	♠ :9-982-257-00	SPACER, PC BOARD	
226	♠ :9-982-245-00	HOLDER, PC BOARD	
227	3-701-748-00	CLAMP, HARNESS	
228	♠ :9-982-061-00	CABLE, RIBBON 9P	
229	♠ :9-982-260-00	CABLE, RIBBON 10P	
230	♠ :9-982-254-00	HOLDER, PC BOARD	
231	♠ :9-982-253-00	CASE ASS'Y SHIELD	
232	♠ :3-671-865-00	CUSHION, BUTTON	

(6) CASSETTE LOADING ASSEMBLY 1


A
B
C
D
1
2
3
4
E2.3
251
252
253
PSW2.6 x 6
254
P2 x 4
256
257
E2.3
255
251
E2.3
261
262
251
E2.3
270
27
259
253
258
260
263
264
265
266
267
PS2.6 x 4
269
266
268
E2.3
251
BVTT 2.6 x 6
W2
PS2 x 12
BVTT2.6 x 6
276
272
273
274
275
PSW2.6 x 5

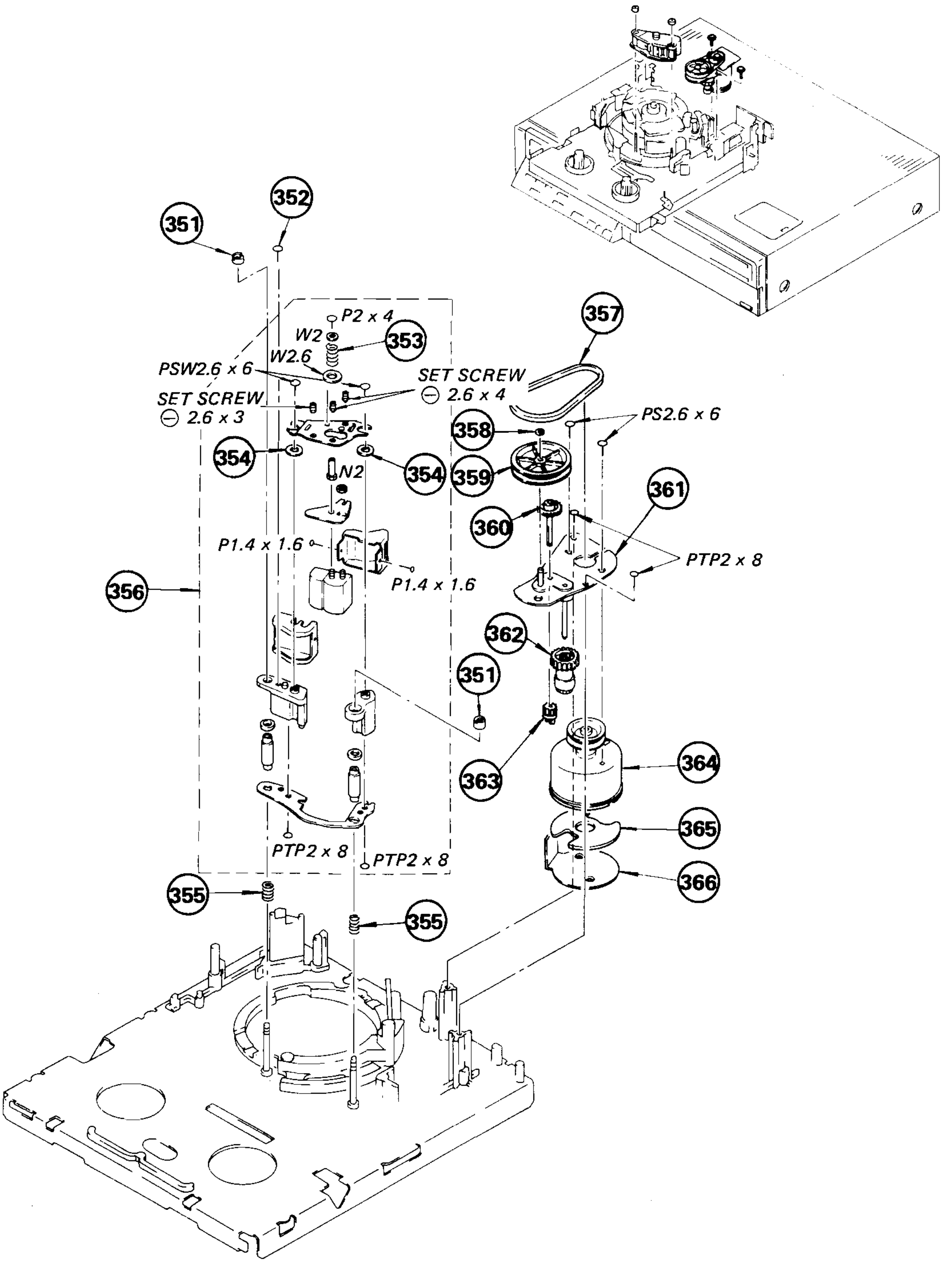
No.	Part No	Description	Remark
251	3-701-439-21	WASHER	
252	3-670-056-00	ARM (L), DOOR	
253	3-500-130-00	SPRING, TENSION	
254	🌢 :3-671-819-00	COVER, SECTOR GEAR	
255	3-670-057-00	ARM (R), DOOR	
256	🌢 :3-670-152-00	ARM, LOCK, UP	
257	3-536-767-XX	SPRING, TENSION	
258	3-670-001-00	LEVER, UNLOCK	
259	3-670-034-00	JOINT, UNLOCK	
260	3-669-465-00	WASHER (1.5), STOPPER	
261	3-670-136-00	ARM, HOLDER DRIVING	
262	3-670-151-00	GEAR, SECTOR	
263	3-670-016-00	GEAR (A)	
264	🌢 :3-670-015-00	WHEEL, WORM	
265	🌢 :3-646-476-00	NUT, PLATE	
266	1-552-664-00	SWITCH, MICRO	
267	3-534-263-00	INSULATOR	
268	🌢 :3-670-168-00	BEARING, WORM	
269	X-3670-001-0	WORM ASSY	
270	X-3670-002-0	MOTOR ASSY, FL	
271	🌢 :A-6728-246-A	LM-9 BOARD, COMPLETE	
272	3-530-248-XX	SPRING, TENSION	
273	🌢 :3-670-010-00	STOPPER, LOCK	
274	🌢 :3-670-009-00	PLATE, LOCK	
275	🌢 :3-670-011-00	PLATE, ADJUSTMENT, CD	
276	3-630-615-XX	SPRING, TENSION	

(7) CASSETTE LOADING ASSEMBLY 2


A
B
C
D
1
2
3
4
301
304
302
305
310
311
312
313
E2.3
BVTT
2.6 x 6
303
E2.3
SW2
317
P2 x 3
322
W2
323
324
319
320
327
306
307
E2.3
308
309
313
314
311
315
326
E2.3
321
319
W2
SW2
P2 x 3
324
316
328
P2 x 4
330
329
318
325
317
PSW2.6 x 6
P2 x 4
333
332
331
334
W2
PS2 x 4
335

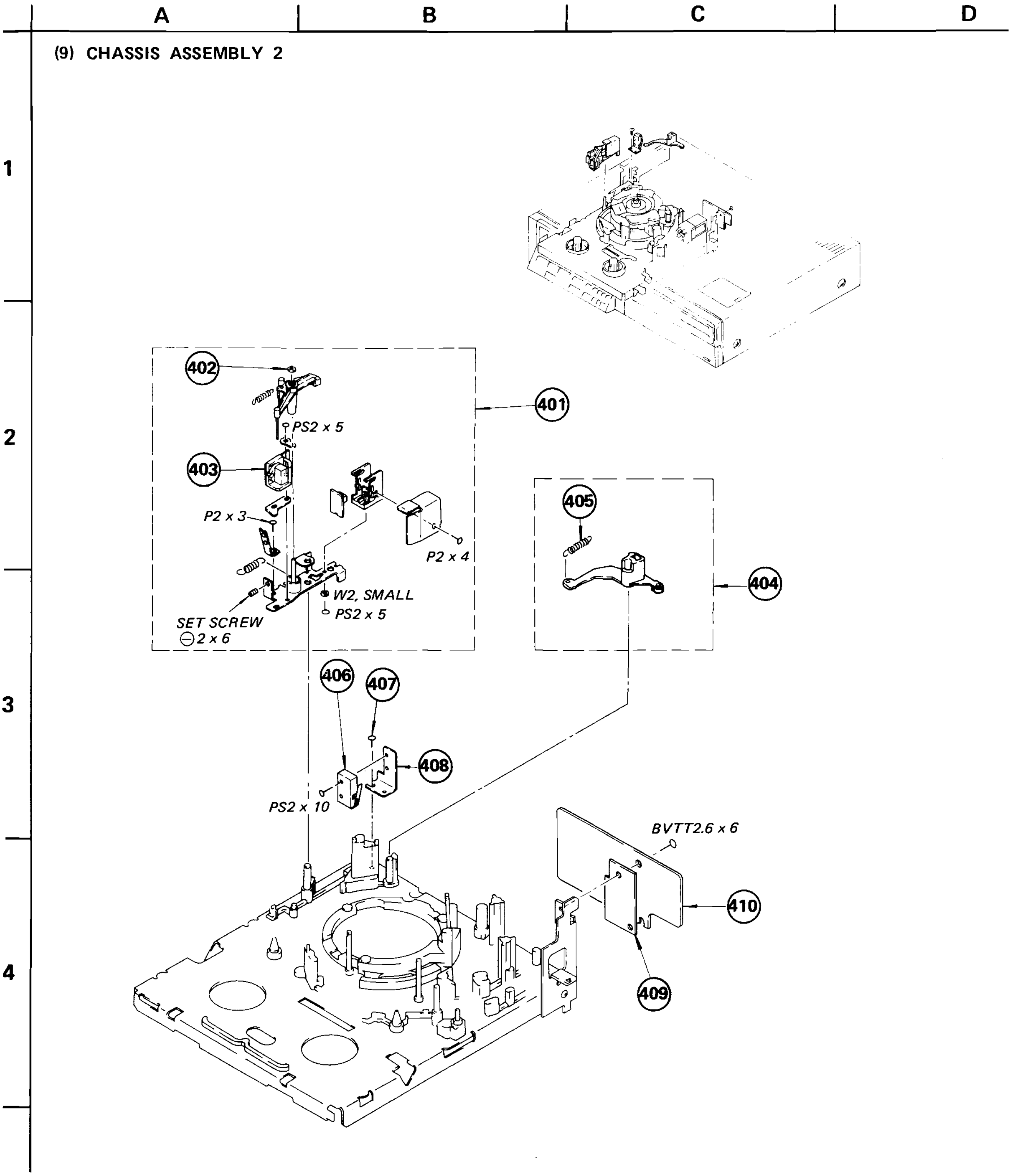
No.	Part No	Description	Remark
301	3-671-863-00	STRING, PULL, WIRE	
302	3-535-021-00	SPRING, TENSION	
303	3-671-864-00	PLATE, SPRING HOOK	
304	3-670-003-00	CAM (L), C-IN	
305	3-670-018-00	ROLLER, GUIDE	
306	3-670-004-00	CAM (R), C-IN	
307	♠ :X-3670-005-0	ARM ASSY, OPEN LID	
308	3-670-054-00	ROLLER, OPEN LID	
309	3-669-465-00	WASHER (1.5), STOPPER	
310	3-670-006-00	GEAR (E)	
311	3-670-169-00	SPRING, TENSION	
312	♠ :3-670-031-00	RETAINER (L), CASSETTE	
313	♠ :3-646-334-00	CUSHION	
314	♠ :3-670-041-00	RETAINER (R), CASSETTE	
315	3-670-005-00	GEAR (B)	
316	3-671-878-00	ROLLER (B), GUIDE	
	3-671-892-00	ROLLER (M), GUIDE	
317	3-670-007-00	GEAR (C)	
318	♠ :3-670-053-00	SHAFT, JOINT	
319	3-489-310-XX	SPRING, TENSION	
320	♠ :3-670-036-00	PLATE (L), SLIDE, C	
321	♠ :3-670-037-00	PLATE (R), SLIDE, C	
322	♠ :1-605-111-00	CI-2 BOARD	
323	♠ :3-670-039-00	HOLDER (R), CSW	
324	1-553-719-00	SWITCH, MICRO	
325	♠ :1-605-112-00	CI-3 BOARD	
326	♠ :3-670-038-00	HOLDER (L), CSW	
327	3-670-058-00	SPRING, LEAF	
328	3-670-150-21	PLATE, BLIND	
329	♠ :3-670-170-00	TUBE, RUBBER	
330	♠ :A-6728-247-A	RL-4 BOARD, COMPLETE	
331	3-573-469-00	RETAINER, LEAD, SD	
332	♠ :3-670-032-00	RAIL (R)	
333	♠ :3-670-012-00	OPEN LID	
334	X-3670-044-0	DOOR ASSY, CASSETTE	335
335	3-670-110-11	PLATE, ORNAMENTAL, CASSETTE DOOR	

(8) CHASSIS ASSEMBLY 1


A
B
C
D
1
2
3
4
351
352
P2 x 4
W2
353
W2.6
PSW2.6 x 6
SET SCREW
⊖ 2.6 x 3
SET SCREW
⊖ 2.6 x 4
357
PS2.6 x 6
358
354
354
N2
359
361
360
P1.4 x 1.6
P1.4 x 1.6
PTP2 x 8
356
362
351
363
364
365
PTP2 x 8
PTP2 x 8
366
355
355

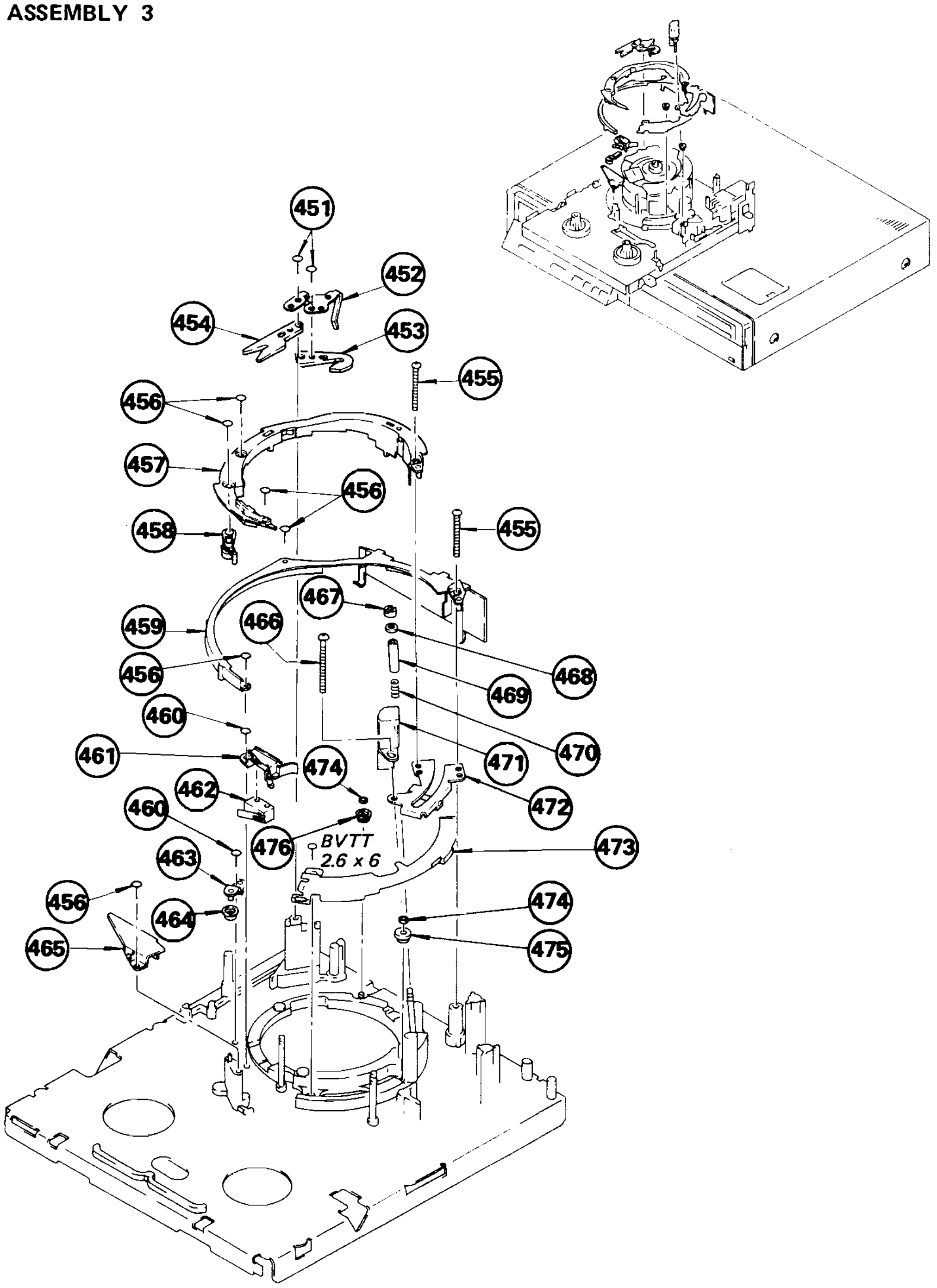
No.	Part No	Description	Remark
351	3-669-318-00	NUT, ADJUSTMENT, GUIDE	
352	3-669-480-11	+ PTPWH 2	
353	♠ :3-669-316-00	SPRING, COMPRESSION	
354	3-669-598-00	WASHER, CTL	
355	3-669-317-00	SPRING, COMPRESSION	
356	A-6761-043-A	ACE ASSY (M-2)	
357	3-669-327-00	BELT, RUBBER	
358	3-669-465-00	WASHER (1.5), STOPPER	
359	3-669-328-00	PULLEY, GEAR	
360	3-669-332-00	GEAR (BA)	
361	X-3669-324-0	CHASSIS ASSY, MOTOR, L	
362	X-3669-321-0	GEAR (C) ASSY	
363	3-669-333-00	GEAR (BC)	
364	♠ :A-6737-090-A	ASSY, L MOTOR	
365	♠ :A-6728-243-A	LM-8 BOARD, COMPLETE	
366	♠ :3-669-613-00	INSULATOR, L MOTOR	

(9) CHASSIS ASSEMBLY 2


A
B
C
D
1
2
3
4
402
401
PS2 x 5
403
P2 x 3
P2 x 4
405
404
W2, SMALL
PS2 x 5
SET SCREW
⊖2 x 6
406
407
408
PS2 x 10
BVTT2.6 x 6
410
409

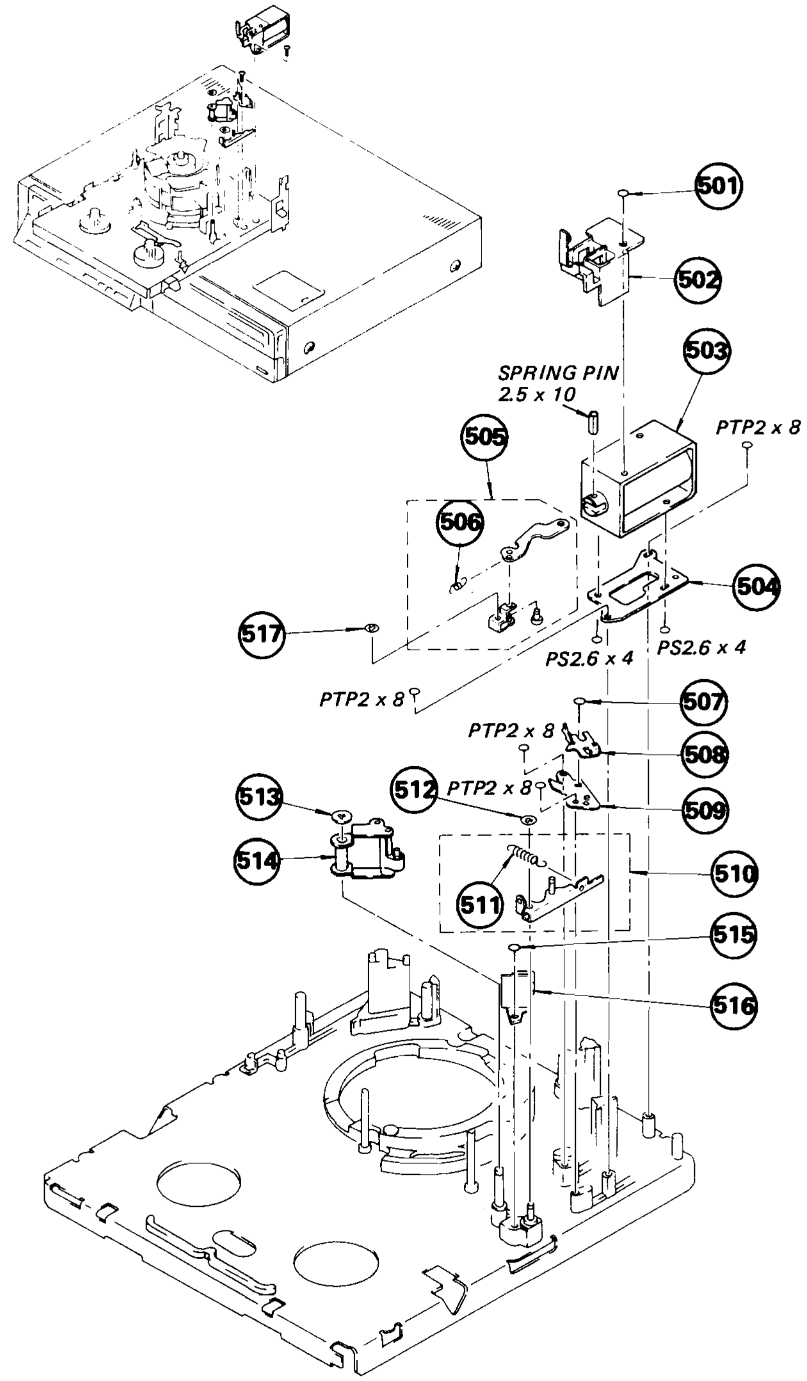
No.	Part No	Description	Remark	No.	Part No	Description	Remark
401	A-6742-037-A	TP ASSY		406	1-552-664-00	SWITCH, MICRO	
402	3-669-465-00	WASHER (1.5), STOPPER		407	3-669-607-00	+PSW (SMALL ROUND) 2.6	
403	1-235-054-21	COIL, SENSOR, S		408	♦ :3-669-354-00	BRACKET, SWITCH, LE	
404	X-3669-351-0	ARM ASSY, LOCK	405	409	♦ :3-670-167-00	INSULATOR	
405	3-140-194-XX	SPRING, TENSION		410	♦ :1-606-001-00	RL-7 BOARD	

(10) CHASSIS ASSEMBLY 3


A
B
C
D
1
2
3
4
451
452
453
454
455
456
457
458
459
466
467
455
468
469
456
460
470
461
474
471
462
472
460
476
BVTT
2.6 x 6
473
463
456
474
464
465
475

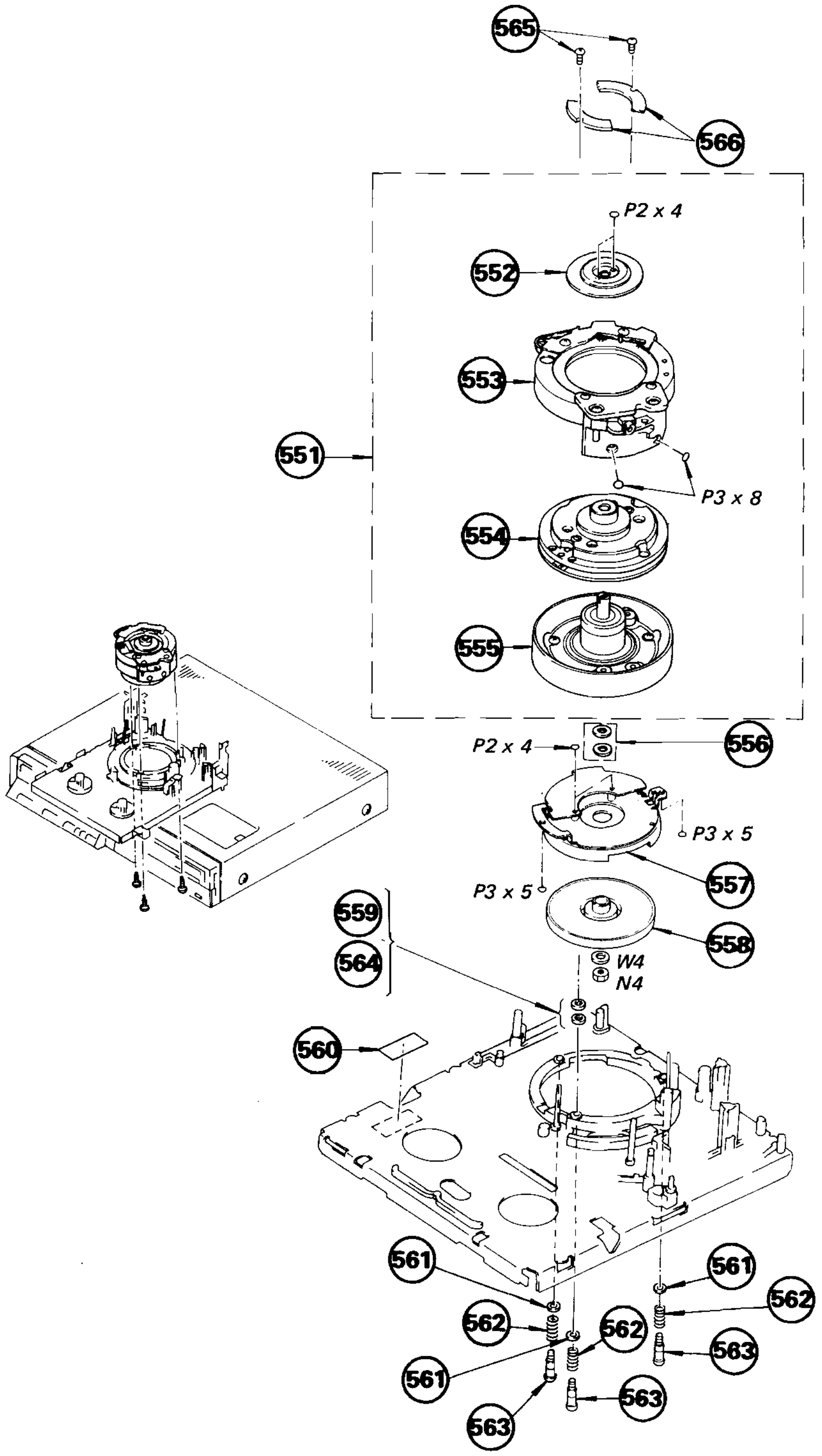
No.	Part No	Description	Remark
451	3-669-480-00	+ PTPWH 2	
452	♦ :3-669-621-00	PLATE, GROUND, TAPE GUIDE	
453	♦ :3-672-507-00	PLATE (3-1), ADJUSTMENT	
454	♦ :3-669-618-00	PLATE (2), ADJUST	
455	3-669-466-00	SCREW (M 2.6)	
456	3-669-480-11	+ PTPWH 2	
457	♦ :3-669-584-00	GUIDE (1), SHUTTLE	
458	X-3669-327-0	ARM ASSY, SWITCH, ULE	
459	♦ :3-669-585-00	GUIDE (2), SHUTTLE	
460	3-669-607-11	+PSW (SMALL ROUND) (2.6)	
461	♦ :3-669-355-00	HOLDER, SWITCH, ULE	
462	1-553-718-00	SWITCH, MICRO	
463	♦ :X-3669-329-0	PLATE ASSY, ADJUSTMENT	
464	3-669-360-00	ROLLER, RING	
465	♦ :3-669-476-04	PLATE, GUIDE	
466	3-669-606-00	SCREW (2.6)	
467	3-669-446-00	NUT, GUIDE, NO. 6	
468	3-669-447-00	FLANGE, GUIDE, NO. 6	
469	3-669-445-00	SPACER, GUIDE, NO. 6	
470	3-669-615-00	SPRING, COMPRESSION	
471	8-825-508-10	HEAD, FE	
472	♦ :X-3669-313-0	BASE ASSY, SLANT	
473	♦ :3-669-477-00	LINER, LINK, PIN	
474	3-669-465-00	WASHER (1.5), STOPPER	
475	3-669-597-00	ROLLER (B), RING	
476	3-669-630-00	ROLLER (C), RING	

(11) CHASSIS ASSEMBLY 4


A
B
C
D
1
2
3
4
501
502
503
SPRING PIN
2.5 x 10
PTP2 x 8
505
506
504
517
PS2.6 x 4
PS2.6 x 4
PTP2 x 8
507
PTP2 x 8
508
513
512
PTP2 x 8
509
514
510
511
515
516

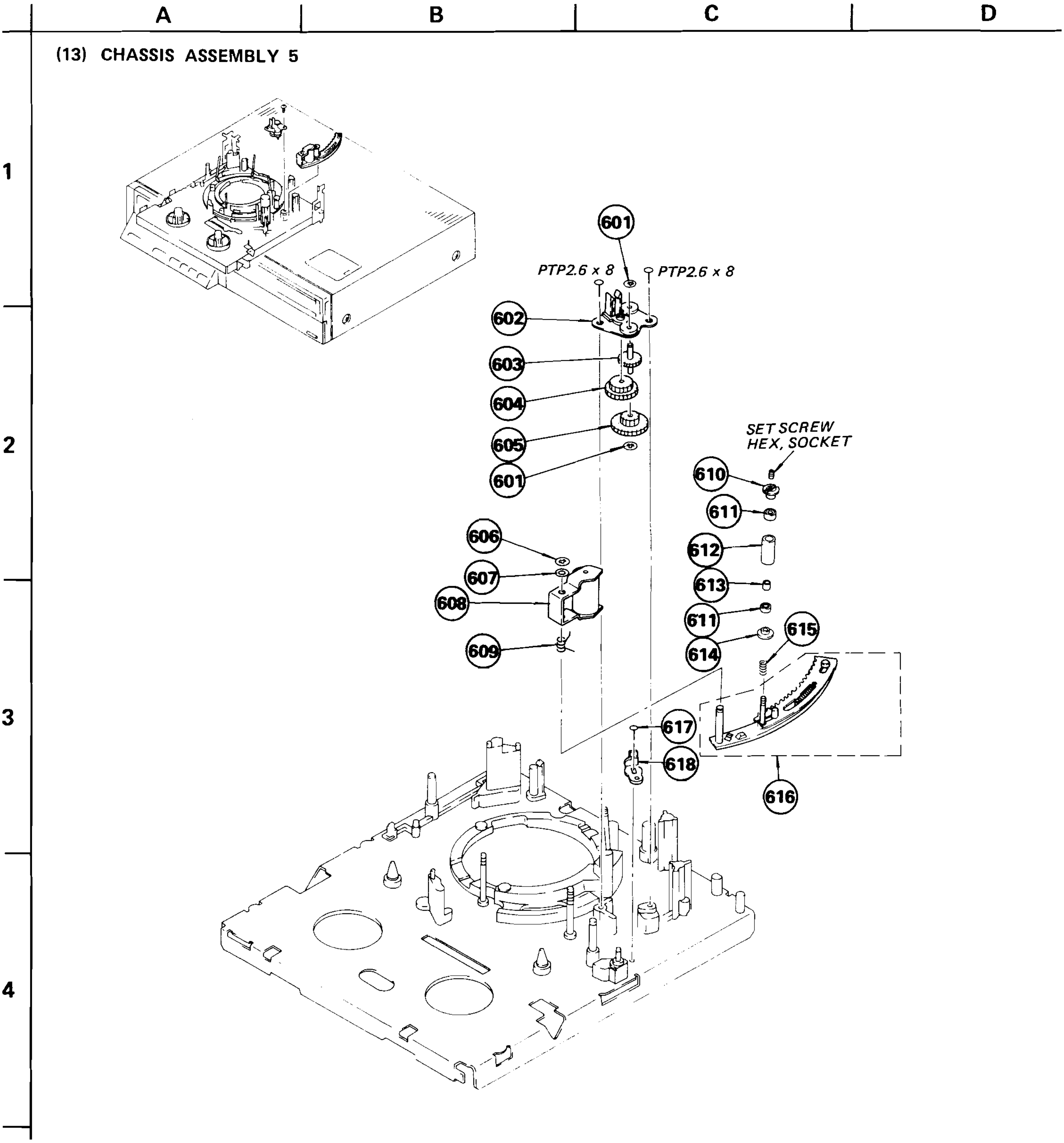
No.	Part No	Description	Remark
501	3-669-607-11	+PSW (SMALL ROUND) (2.6)	
502 ♠	:3-671-827-00	CLAMP (D), HARNESS	
503	1-454-282-00	SOLENOID, PLUNGER	
504 ♠	:3-669-459-00	BRACKET, SOLENOID	
505	X-3669-365-0	ARM ASSY, PINCH SOLENOID	506
506	3-669-440-00	SPRING, TENSION	
507	3-669-607-31	+PSW (SMALL ROUND) (2.6)	
508 ♠	:3-669-462-00	PLATE, ADJUSTMENT, LIMITER, PINCH	
509 ♠	:3-669-349-00	PLATE, LOCK, T	
510 ♠	:X-3669-379-0	ARM (P) ASSY, PINCH LIMITER	511
511	3-465-159-XX	SPRING, TENSION	
512	3-669-595-00	WASHER (2), STOPPER	
513	3-669-596-00	WASHER (2.3), STOPPER	
514 ♠	:X-3669-309-0	ARM ASSY, PRESS, PINCH	
515	3-669-480-11	+ PTPWH 2	
516	1-235-055-21	COIL SENSOR, T	
517	3-669-465-00	WASHER (1.5), STOPPER	

(12) DRUM ASSEMBLY


A
B
C
D
1
2
3
4
565
566
P2 x 4
552
553
551
P3 x 8
554
555
P2 x 4
556
P3 x 5
557
P3 x 5
559
564
558
W4
N4
560
561
562
562
561
563
561
562
563
563

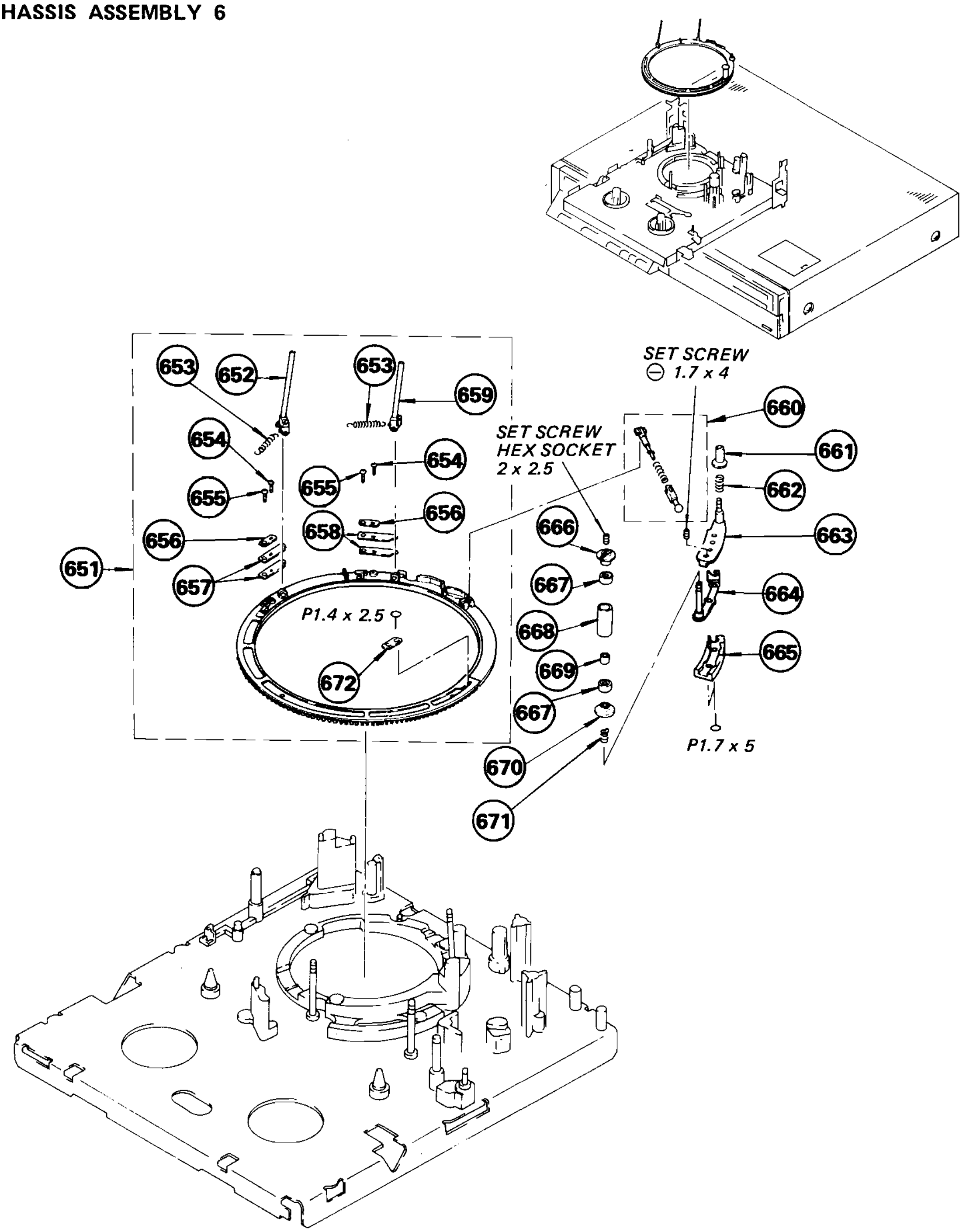
No.	Part No	Description	Remark
551	A-6050-116-A	DRUM ASS'Y DSH-16A-R	
552	X-3669-106-0	DAMPER ASS'Y	
553	A-6760-064-A	DRUM ASS'Y, UPPER	
554	A-6762-063-A	DISK ASS'Y	
555	A-6762-060-B	FLANGE ASS'Y LOWER DRUM	
556	X-3669-105-0	SPACER BLOCK ASS'Y	
557	X-2621-204-2	STATOR ASS'Y, DRUM	
558	X-2621-202-0	ROTAR ASS'Y, DRUM	
559	♠ :3-669-646-00	SPACER, DRUM	
560	3-701-703-00	KODA ID MARK	
561	3-669-600-11	WASHER, FLAT (3.5)	
562	3-429-123-00	SPRING	
563	3-669-302-00	SCREW, FITTING	
564	♠ :3-669-646-11	SPACER, DRUM	
565	3-669-696-00	SCREW, WEIGHT (M2.6X6)	
566	♠ :3-669-684-00	WEIGHT	

(13) CHASSIS ASSEMBLY 5


A
B
C
D
1
2
3
4
601
PTP2.6 x 8
PTP2.6 x 8
602
603
604
605
601
SET SCREW
HEX, SOCKET
610
611
612
613
611
615
614
606
607
608
609
617
618
616

No.	Part No	Description	Remark
601	3-669-465-00	WASHER (1.5), STOPPER	
602	X-3669-326-0	CHASSIS ASSY, GEAR, DRIVE	
603	X-3669-305-0	GEAR (F) ASSY	
604	3-669-338-00	GEAR (E)	
605	3-669-337-00	GEAR (D)	
606	3-669-596-00	WASHER (2.3), STOPPER	
607	3-701-439-01	WASHER	
608	X-3669-307-0	ARM ASSY, PINCH ROLLER	
609	3-669-444-00	SPRING, TORSION	
610	3-669-431-00	FLANGE (UPPER), GUIDE	
611	3-669-443-00	BEARING, BALL (NO FLANGE)	
612	3-669-438-00	ROLLER, GUIDE	
613	3-657-841-31	SPACER (DIA. 2)	
614	3-669-432-00	FLANGE (LOWER), GUIDE	
615	3-669-452-00	SPRING, COMPRESSION	
616 ♦	:X-3669-350-0	GEAR ASSY, SLIDER	
617	3-669-607-11	+PSW (SMALL ROUND) (2.6)	
618 ♦	:3-669-350-00	STOPPER, SLIDER	

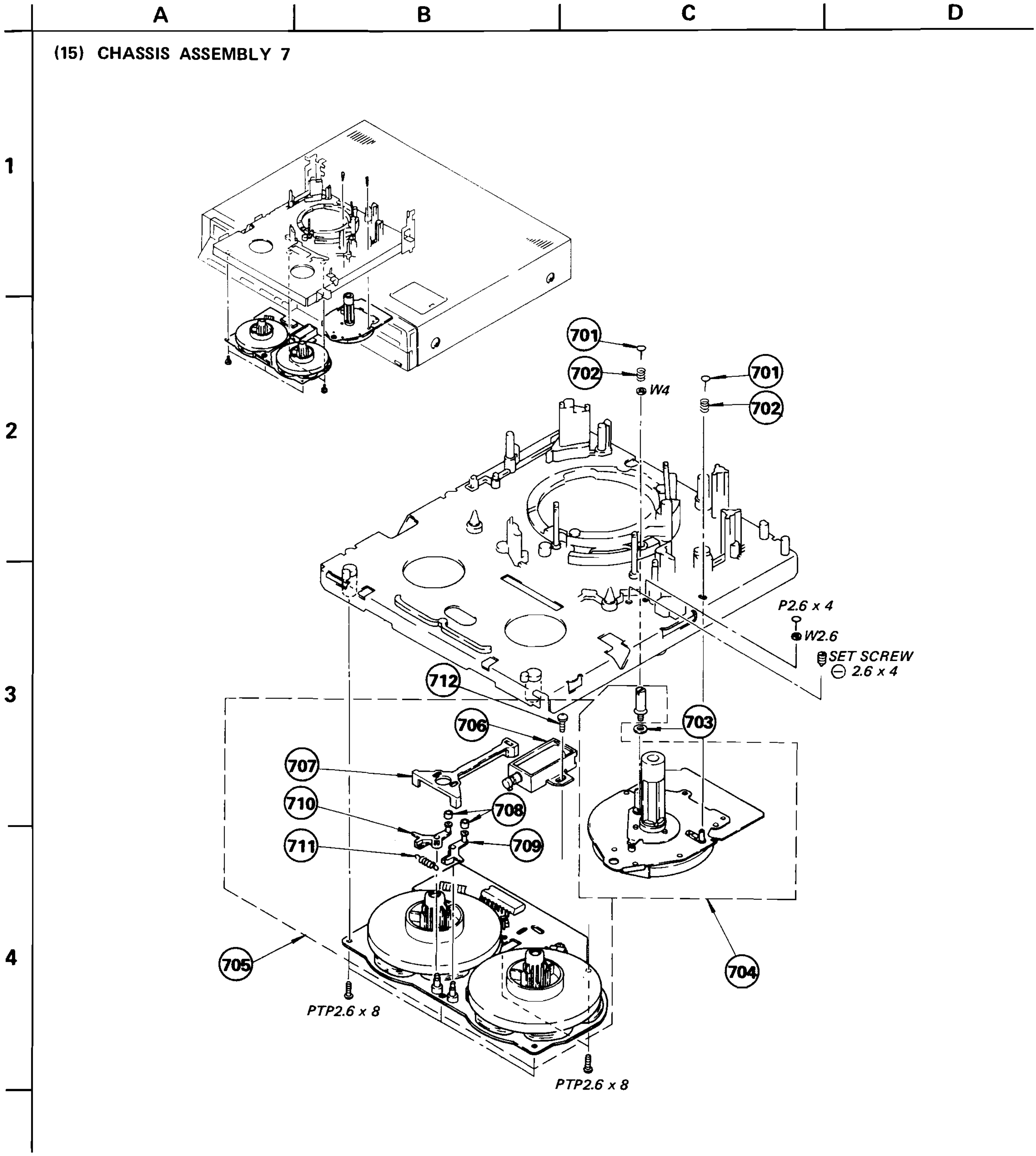
(14) CHASSIS ASSEMBLY 6


A
B
C
D
1
2
3
4
653
652
653
659
654
654
655
655
656
658
656
651
657
P1.4 x 2.5
672
SET SCREW
⊖ 1.7 x 4
660
661
SET SCREW
HEX SOCKET
2 x 2.5
662
666
663
667
664
668
665
669
667
P1.7 x 5
670
671

No.	Part No	Description	Remark
651	X-3669-353-0	RING ASSY, THREADING, S	652,653,654,655 656,657,658,659 672
652	♠ :X-3669-303-0	GUIDE ASSY, NO. 2	
653	3-669-473-00	SPRING, TENSION	
654	3-669-478-00	SCREW (1X3), TAPPING	
655	3-669-479-11	SCREW (1.4X3.5), TAPPING	
656	♠ :3-669-472-00	RETAINER, SPRING, LEAF	
657	3-669-470-00	SPRING (2), LEAF	
658	3-669-471-00	SPRING (3), LEAF, LIMITER	
659	♠ :X-3669-304-0	GUIDE ASSY, NO. 3	
660	X-3669-316-0	ROD ASSY, PUSH	

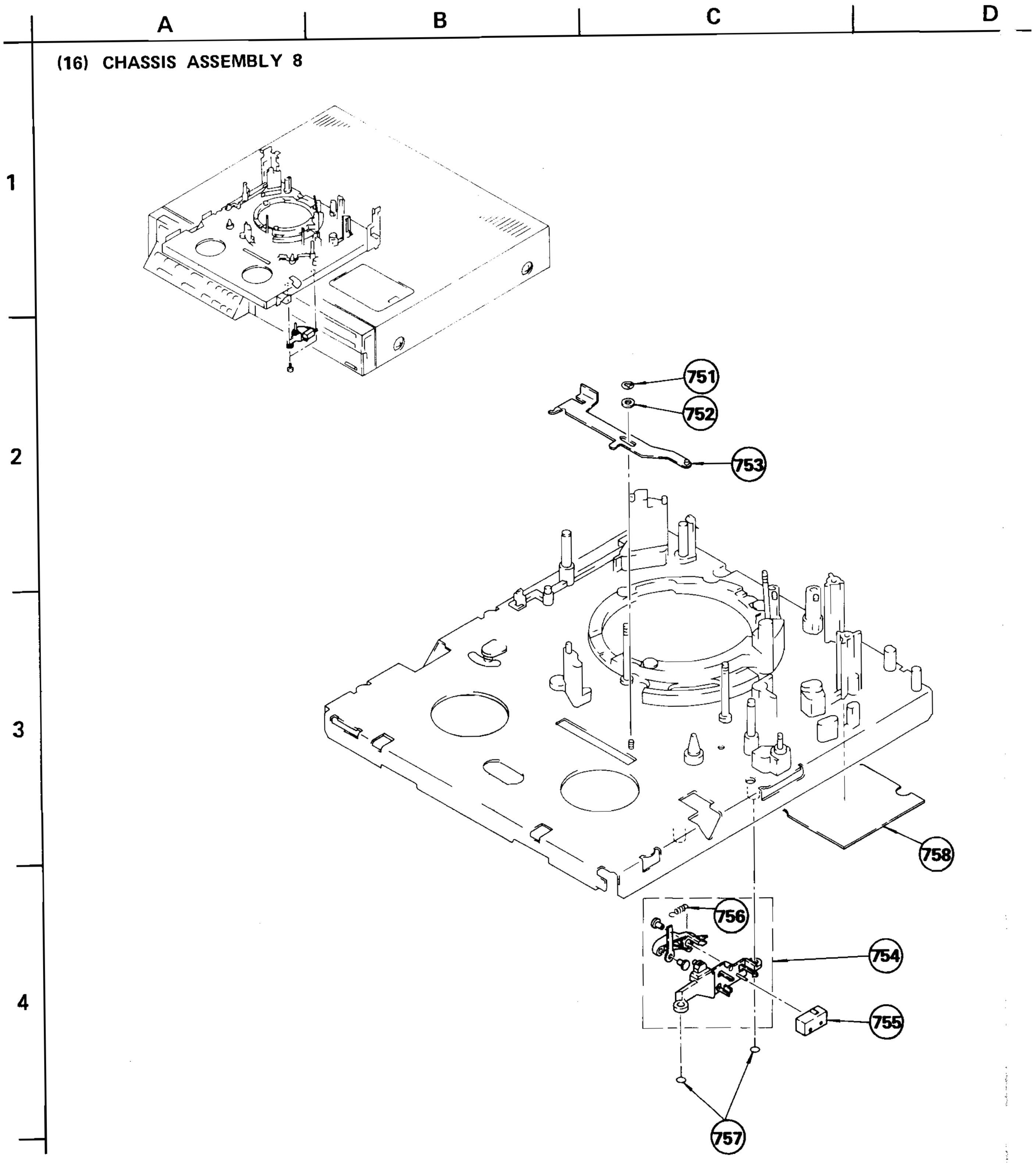
No.	Part No	Description	Remark
661	♠ :3-669-643-00	SLEEVE, GUIDE, NO. 4	
662	3-669-666-00	SPRING, COMPRESSION	
663	♠ :X-3669-314-0	PLATE ASSY, SHUTTLE	
664	♠ :X-3669-315-0	HEAD ASSY, TILT	
665	♠ :3-669-540-00	BLOCK, SHUTTLE	
666	3-669-431-00	FLANGE (UPPER), GUIDE	
667	3-669-443-00	BEARING, BALL (NO FLANGE)	
668	3-669-668-00	ROLLER, GUIDE	
669	3-657-841-31	SPACER (DIA. 2)	
670	3-669-667-00	FLANGE (LOWER), GUIDE	
671	3-669-666-00	SPRING, COMPRESSION	
672	♠ :3-669-616-00	RETAINER	

(15) CHASSIS ASSEMBLY 7


A
B
C
D
1
2
3
4
701
702
W4
701
702
P2.6 x 4
W2.6
SET SCREW
⊖ 2.6 x 4
712
706
703
707
710
708
711
709
705
704
PTP2.6 x 8
PTP2.6 x 8

No.	Part No	Description	Remark
701	3-669-633-00	SCREW, + PW2	
702	3-669-602-00	SPRING, COMPRESSION	
703	3-669-697-00	SPACER, CAPSTAN	
704	8-838-022-11	MOTOR, DC (BHF-1900B)	
705	♦ :A-6737-093-A	BLOCK ASSY, L MOTOR	
706	1-454-281-00	SOLENOID, PLUNGER	
707	♦ :3-669-530-00	ARM, BRAKE	
708	3-669-305-00	BUSHING	
709	♦ :3-669-303-00	BRAKE, T	
710	♦ :3-669-304-00	BRAKE, S	
711	3-491-360-00	SPRING, TENSION	
712	3-669-663-00	+PSW 2.6	

(16) CHASSIS ASSEMBLY 8


A
B
C
D
1
2
3
4
751
752
753
758
756
754
755
757

No.	Part No	Description	Remark
751	3-669-595-00	WASHER (2), STOPPER	
752	3-701-438-21	WASHER	
753	♠ :X-3670-021-0	PLATE ASSY, UNLOCK	
754	♠ :X-3669-323-0	MR ASSY	
755	1-553-717-00	SWITCH, MICRO	
756	♠ :3-669-411-00	SPRING, TENSION	
757	3-669-480-11	+ PTPWH 2	
758	♠ :3-669-599-00	INSULATOR	

SECTION 6

ELECTRICAL PARTS LIST

Ref.No	Part No	Description	Remark
	♠:A-6711-293-A	VA-3 BOARD, COMPLETE *********************	
	♠:3-670-153-00	HOLDER, PCB	
	3-670-164-00	SPACER, JACK	
	♠:3-671-851-00	CASE (MAIN), SHIELD, VA-V	
	♠:3-671-853-00	LID, REAR, CASE, SHIELD, VA-V	
	♠:3-671-854-00	CASE (MAIN), SHIELD, VA-A	
	♠:3-671-856-00	LID, REAR, CASE, SHIELD, VA-A	
	3-671-893-00	CLAMP (LOW TYPE)	
	3-701-444-11	WASHER, 6	

CAPACITOR

Ref.No	Part No	Description			Remark
C001	1-123-838-00	ELECT	1000MF	20%	6.3V
C002	1-123-838-00	ELECT	1000MF	20%	6.3V
C003	1-161-013-00	CERAMIC	0.01MF	10%	25V
C004	1-102-950-00	CERAMIC	13PF	5%	50V
C008	1-102-971-00	CERAMIC	82PF	5%	50V
C009	1-123-381-00	ELECT	2.2MF	20%	50V
C010	1-102-972-00	CERAMIC	91PF	5%	50V
C011	1-123-381-00	ELECT	2.2MF	20%	50V
C012	1-101-884-00	CERAMIC	56PF	5%	50V
C013	1-123-381-00	ELECT	2.2MF	20%	50V
C014	1-161-013-00	CERAMIC	0.01MF	10%	25V
C015	1-161-013-00	CERAMIC	0.01MF	10%	25V
C016	1-161-013-00	CERAMIC	0.01MF	10%	25V
C017	1-123-381-00	ELECT	2.2MF	20%	50V
C018	1-123-356-00	ELECT	10MF	20%	16V
C019	1-161-013-00	CERAMIC	0.01MF	10%	25V
C020	1-161-021-00	CERAMIC	0.047MF	10%	25V
C021	1-123-318-00	ELECT	33MF	20%	16V
C022	1-102-963-00	CERAMIC	33PF	5%	50V
C023	1-101-880-00	CERAMIC	47PF	5%	50V
C025	1-101-361-00	CERAMIC	150PF	5%	50V
C026	1-123-356-00	ELECT	10MF	20%	16V
C027	1-101-884-00	CERAMIC	56PF	5%	50V
C028	1-102-971-00	CERAMIC	82PF	5%	50V
C029	1-102-966-00	CERAMIC	43PF	5%	50V
C030	1-102-947-00	CERAMIC	10PF	5%	50V
C031	1-161-021-00	CERAMIC	0.047MF	10%	25V
C032	1-102-820-00	CERAMIC	330PF	5%	50V
C033	1-102-118-00	CERAMIC	0.0012MF	10%	50V
C034	1-161-021-00	CERAMIC	0.047MF	10%	25V
C035	1-102-947-00	CERAMIC	10PF	5%	50V
C036	1-123-330-00	ELECT	22MF	20%	16V
C037	1-123-356-00	ELECT	10MF	20%	16V
C038	1-161-013-00	CERAMIC	0.01MF	10%	25V
C039	1-123-380-00	ELECT	1MF	20%	50V
C040	1-123-380-00	ELECT	1MF	20%	50V
C041	1-102-965-00	CERAMIC	39PF	5%	50V
C042	1-123-340-00	ELECT	4.7MF	20%	35V
C043	1-102-074-00	CERAMIC	0.001MF	10%	50V
C044	1-123-305-00	ELECT	33MF	20%	10V
C045	1-102-074-00	CERAMIC	0.001MF	10%	50V
C046	1-102-947-00	CERAMIC	10PF	5%	50V
C047	1-123-330-00	ELECT	22MF	20%	16V
C048	1-102-947-00	CERAMIC	10PF	5%	50V
C049	1-102-947-00	CERAMIC	10PF	5%	50V
C050	1-123-330-00	ELECT	22MF	20%	16V
C051	1-123-340-00	ELECT	4.7MF	20%	35V
C052	1-123-330-00	ELECT	22MF	20%	16V
C053	1-123-330-00	ELECT	22MF	20%	16V
C054	1-123-330-00	ELECT	22MF	20%	16V
C055	1-102-962-00	CERAMIC	30PF	5%	50V
C056	1-101-888-00	CERAMIC	68PF	5%	50V
C057	1-102-936-00	CERAMIC	3PF	0.25PF	50V
C058	1-161-013-00	CERAMIC	0.01MF	10%	25V
C059	1-123-381-00	ELECT	2.2MF	20%	50V
C060	1-123-356-00	ELECT	10MF	20%	16V
C061	1-123-305-00	ELECT	33MF	20%	10V
C062	1-123-356-00	ELECT	10MF	20%	16V
C063	1-123-305-00	ELECT	33MF	20%	10V
C064	1-123-356-00	ELECT	10MF	20%	16V
C065	1-123-305-00	ELECT	33MF	20%	10V
C066	1-101-888-00	CERAMIC	68PF	5%	50V
C067	1-102-964-00	CERAMIC	36PF	5%	50V
C068	1-102-953-00	CERAMIC	18PF	5%	50V
C069	1-161-013-00	CERAMIC	0.01MF	10%	25V
C070	1-102-963-00	CERAMIC	33PF	5%	50V
C071	1-102-816-00	CERAMIC	120PF	5%	50V
C072	1-101-884-00	CERAMIC	56PF	5%	50V
C073	1-102-973-00	CERAMIC	100PF	5%	50V
C074	1-123-356-00	ELECT	10MF	20%	16V
C075	1-123-356-00	ELECT	10MF	20%	16V
C076	1-101-888-00	CERAMIC	68PF	5%	50V
C078	1-161-013-00	CERAMIC	0.01MF	10%	25V
C079	1-161-013-00	CERAMIC	0.01MF	10%	25V
C080	1-161-013-00	CERAMIC	0.01MF	10%	25V
C081	1-123-330-00	ELECT	22MF	20%	16V
C082	1-101-059-00	CERAMIC	510PF	5%	50V
C083	1-123-356-00	ELECT	10MF	20%	16V
C084	1-123-356-00	ELECT	10MF	20%	16V
C086	1-102-074-00	CERAMIC	0.001MF	10%	50V
C089	1-123-333-00	ELECT	100MF	20%	16V
C090	1-123-356-00	ELECT	10MF	20%	16V
C091	1-123-307-00	ELECT	100MF	20%	10V
C092	1-123-330-00	ELECT	22MF	20%	16V
C093	1-123-607-00	ELECT	0.1MF	20%	50V
C094	1-123-332-00	ELECT	47MF	20%	16V
C095	1-123-610-00	ELECT	0.47MF	20%	50V
C096	1-161-021-00	CERAMIC	0.047MF	10%	25V
C097	1-123-318-00	ELECT	33MF	20%	16V
C098	1-130-495-00	MYLAR	0.1MF	5%	50V
C099	1-123-356-00	ELECT	10MF	20%	16V
C100	1-123-380-00	ELECT	1MF	20%	50V
C101	1-102-977-00	CERAMIC	200PF	5%	50V

NOTE:

The components identified by shading and mark ⚠ are critical for safety. Replace only with part number specified.

Les composants identifiés par une trame et une marque ⚠ sont critiques pour la sécurité. Ne les remplacer que par une pièce portant le numéro spécifié.

When indicating parts by reference number, please include the board name.

- =>: Due to standardization, interchangeable replacements may be substituted for parts specified in the diagrams.
- Items marked " ♠ " are not stocked since they are seldom required for routine service. Some delay should be anticipated when ordering these items.

- All variable and adjustable resistors have characteristic curve B, unless otherwise noted.

CAPACITORS
- MF : μF, PF : μμF

RESISTORS
- All resistors are in ohms
- F : nonflammable

COILS
- MMH : mH, UH : μH

VA-3 BOARD

Ref.No	Part No	Description			Remark
C102	1-102-820-00	CERAMIC	330PF	5%	50V
C103	1-123-356-00	ELECT	10MF	20%	16V
C104	1-108-591-00	MYLAR	0.033MF	5%	50V
C105	1-101-059-00	CERAMIC	510PF	5%	50V
C106	1-161-021-00	CERAMIC	0.047MF	10%	25V
C107	1-108-555-00	MYLAR	0.001MF	5%	50V
C108	1-102-820-00	CERAMIC	330PF	5%	50V
C109	1-108-555-00	MYLAR	0.001MF	5%	50V
C110	1-123-356-00	ELECT	10MF	20%	16V
C111	1-161-021-00	CERAMIC	0.047MF	10%	25V
C112	1-123-306-00	ELECT	47MF	20%	10V
C113	1-123-305-00	ELECT	33MF	20%	10V
C114	1-101-888-00	CERAMIC	68PF	5%	50V
C115	1-102-963-00	CERAMIC	33PF	5%	50V
C116	1-101-059-00	CERAMIC	510PF	5%	50V
C120	1-102-116-00	CERAMIC	680PF	10%	50V
C121	1-102-116-00	CERAMIC	680PF	10%	50V
C122	1-123-380-00	ELECT	1MF	20%	50V
C123	1-123-379-00	ELECT	0.47MF	20%	50V
C124	1-123-380-00	ELECT	1MF	20%	50V
C125	1-123-356-00	ELECT	10MF	20%	16V
C126	1-123-356-00	ELECT	10MF	20%	16V
C127	1-102-951-00	CERAMIC	15PF	5%	50V
C128	1-161-013-00	CERAMIC	0.01MF	10%	25V
C129	1-101-888-00	CERAMIC	68PF	5%	50V
C130	1-101-888-00	CERAMIC	68PF	5%	50V
C131	1-161-013-00	CERAMIC	0.01MF	10%	25V
C132	1-102-978-00	CERAMIC	220PF	5%	50V
C133	1-123-379-00	ELECT	0.47MF	20%	50V
C134	1-161-013-00	CERAMIC	0.01MF	10%	25V
C135	1-123-356-00	ELECT	10MF	20%	16V
C136	1-123-382-00	ELECT	3.3MF	20%	50V
C137	1-102-074-00	CERAMIC	0.001MF	10%	50V
C138	1-161-013-00	CERAMIC	0.01MF	10%	25V
C139	1-161-013-00	CERAMIC	0.01MF	10%	25V
C140	1-161-013-00	CERAMIC	0.01MF	10%	25V
C141	1-102-074-00	CERAMIC	0.001MF	10%	50V
C142	1-161-013-00	CERAMIC	0.01MF	10%	25V
C143	1-123-356-00	ELECT	10MF	20%	16V
C144	1-102-816-00	CERAMIC	120PF	5%	50V
C145	1-161-013-00	CERAMIC	0.01MF	10%	25V
C146	1-123-380-00	ELECT	1MF	20%	50V
C149	1-161-013-00	CERAMIC	0.01MF	10%	25V
C150	1-123-340-00	ELECT	4.7MF	20%	35V
C151	1-131-345-00	ELECT(SOLID)	0.47MF	10%	25V
C152	1-161-013-00	CERAMIC	0.01MF	10%	25V
C153	1-161-013-00	CERAMIC	0.01MF	10%	25V
C155	1-161-013-00	CERAMIC	0.01MF	10%	25V
C156	1-161-013-00	CERAMIC	0.01MF	10%	25V
C157	1-123-039-00	ELECT	22MF	20%	16V
C158	1-131-347-00	ELECT(SOLID)	1MF	20%	16V
C159	1-123-356-00	ELECT	10MF	20%	16V
C160	1-123-356-00	ELECT	10MF	20%	16V
C161	1-123-356-00	ELECT	10MF	20%	16V
C162	1-123-356-00	ELECT	10MF	20%	16V
C163	1-161-013-00	CERAMIC	0.01MF	10%	25V
C164	1-123-356-00	ELECT	10MF	20%	16V
C165	1-123-305-00	ELECT	33MF	20%	10V
C166	1-130-495-00	MYLAR	0.1MF	5%	50V
C167	1-123-381-00	ELECT	2.2MF	20%	50V
C168	1-123-382-00	ELECT	3.3MF	20%	50V
C169	1-123-382-00	ELECT	3.3MF	20%	50V
C170	1-123-330-00	ELECT	22MF	20%	16V
C171	1-102-948-00	CERAMIC	11PF	5%	50V
C172	1-123-356-00	ELECT	10MF	20%	16V
C174	1-102-074-00	CERAMIC	0.001MF	10%	50V
C176	1-102-947-00	CERAMIC	10PF	5%	50V
C178	1-108-583-00	MYLAR	0.015MF	5%	50V
C179	1-102-074-00	CERAMIC	0.001MF	10%	50V
C180	1-102-074-00	CERAMIC	0.001MF	10%	50V
C181	1-102-074-00	CERAMIC	0.001MF	10%	50V
C182	1-102-074-00	CERAMIC	0.001MF	10%	50V
C183	1-161-021-00	CERAMIC	0.047MF	10%	25V
C184	1-161-013-00	CERAMIC	0.01MF	10%	25V
C185	1-161-013-00	CERAMIC	0.01MF	10%	25V
C186	1-102-951-00	CERAMIC	15PF	5%	50V
C187	1-102-959-00	CERAMIC	22PF	5%	50V
C188	1-123-382-00	ELECT	3.3MF	20%	50V
C189	1-123-039-00	ELECT	22MF	20%	16V
C190	1-161-013-00	CERAMIC	0.01MF	10%	25V
C191	1-161-039-00	CERAMIC	0.001MF	10%	25V
C192	1-161-013-00	CERAMIC	0.01MF	10%	25V
C193	1-161-013-00	CERAMIC	0.01MF	10%	25V
C194	1-161-021-00	CERAMIC	0.047MF	10%	25V
C195	1-123-380-00	ELECT	1MF	20%	50V
C196	1-102-962-00	CERAMIC	30PF	5%	50V
C197	1-161-013-00	CERAMIC	0.01MF	10%	25V
C198	1-123-380-00	ELECT	1MF	20%	50V
C199	1-102-973-00	CERAMIC	100PF	5%	50V
C200	1-161-021-00	CERAMIC	0.047MF	10%	25V
C201	1-102-973-00	CERAMIC	100PF	5%	50V
C203	1-101-361-00	CERAMIC	150PF	5%	50V
C204	1-161-013-00	CERAMIC	0.01MF	10%	25V
C206	1-123-380-00	ELECT	1MF	20%	50V
C207	1-123-380-00	ELECT	1MF	20%	50V
C208	1-161-021-00	CERAMIC	0.047MF	10%	25V
C209	1-161-021-00	CERAMIC	0.047MF	10%	25V
C210	1-102-958-00	CERAMIC	20PF	5%	50V
C211	1-161-013-00	CERAMIC	0.01MF	10%	25V
C212	1-161-013-00	CERAMIC	0.01MF	10%	25V
C215	1-161-013-00	CERAMIC	0.01MF	10%	25V
C216	1-102-973-00	CERAMIC	100PF	5%	50V
C217	1-161-021-00	CERAMIC	0.047MF	10%	25V
C218	1-123-381-00	ELECT	2.2MF	20%	50V
C220	1-101-888-00	CERAMIC	68PF	5%	50V
C222	1-161-021-00	CERAMIC	0.047MF	10%	25V

NOTE:

The components identified by shading and mark ⚠ are critical for safety. Replace only with part number specified.

Les composants identifiés par une trame et une marque ⚠ sont critiques pour la sécurité. Ne les remplacer que par une pièce portant le numéro spécifié.

When indicating parts by reference number, please include the board name.

- =>: Due to standardization, interchangeable replacements may be substituted for parts specified in the diagrams.
- Items marked " ♠ " are not stocked since they are seldom required for routine service. Some delay should be anticipated when ordering these items.

- All variable and adjustable resistors have characteristic curve B, unless otherwise noted.

CAPACITORS
- MF : μF, PF : μμF

RESISTORS
- All resistors are in ohms
- F : nonflammable

COILS
- MMH : mH, UH : μH

Ref.No	Part No	Description			Remark
C223	1-161-063-00	CERAMIC	0.1MF	20%	25V
C224	1-102-958-00	CERAMIC	20PF	5%	50V
C226	1-161-021-00	CERAMIC	0.047MF	10%	25V
C228	1-161-021-00	CERAMIC	0.047MF	10%	25V
C230	1-123-330-00	ELECT	22MF	20%	16V
C232	1-161-013-00	CERAMIC	0.01MF	10%	25V
C301	1-102-516-00	CERAMIC	27PF	5%	50V
C302	1-161-021-00	CERAMIC	0.047MF	10%	25V
C303	1-161-021-00	CERAMIC	0.047MF	10%	25V
C304	1-102-074-00	CERAMIC	0.001MF	10%	50V
C305	1-102-074-00	CERAMIC	0.001MF	10%	50V
C306	1-161-005-00	CERAMIC	0.0022MF	10%	25V
C307	1-161-021-00	CERAMIC	0.047MF	10%	25V
C308	1-161-013-00	CERAMIC	0.01MF	10%	25V
C310	1-102-959-00	CERAMIC	22PF	5%	50V
C311	1-161-013-00	CERAMIC	0.01MF	10%	25V
C312	1-161-013-00	CERAMIC	0.01MF	10%	25V
C313	1-161-013-00	CERAMIC	0.01MF	10%	25V
C314	1-102-963-00	CERAMIC	33PF	5%	50V
C315	1-161-021-00	CERAMIC	0.047MF	10%	25V
C317	1-102-125-00	CERAMIC	0.0047MF	10%	50V
C318	1-123-340-00	ELECT	4.7MF	20%	35V
C319	1-161-013-00	CERAMIC	0.01MF	10%	25V
C320	1-102-958-00	CERAMIC	20PF	5%	50V
C321	1-161-021-00	CERAMIC	0.047MF	10%	25V
C323	1-108-573-00	MYLAR	0.0056MF	5%	50V
C325	1-123-332-00	ELECT	47MF	20%	16V
C328	1-161-021-00	CERAMIC	0.047MF	10%	25V
C329	1-161-021-00	CERAMIC	0.047MF	10%	25V
C332	1-102-953-00	CERAMIC	18PF	5%	50V
C333	1-102-961-00	CERAMIC	27PF	5%	50V
C500	1-108-555-00	MYLAR	0.001MF	5%	50V
C501	1-108-561-00	MYLAR	0.0018MF	5%	50V
C502	1-102-116-00	CERAMIC	680PF	10%	50V
C503	1-123-294-00	ELECT	47MF	20%	6.3V
C504	1-123-306-00	ELECT	47MF	20%	10V
C505	1-123-356-00	ELECT	10MF	20%	16V
C506	1-108-587-00	MYLAR	0.022MF	5%	50V
C507	1-102-963-00	CERAMIC	33PF	5%	50V
C508	1-123-356-00	ELECT	10MF	20%	16V
C509	1-108-593-00	MYLAR	0.039MF	5%	50V
C510	1-108-583-00	MYLAR	0.015MF	5%	50V
C511	1-108-591-00	MYLAR	0.033MF	5%	50V
C512	1-123-330-00	ELECT	22MF	20%	16V
C513	1-102-980-00	CERAMIC	270PF	5%	50V
C514	1-123-356-00	ELECT	10MF	20%	16V
C515	1-123-379-00	ELECT	0.47MF	20%	50V
C516	1-129-710-00	FILM	0.0047MF	10%	630V
C517	1-108-571-00	MYLAR	0.0047MF	5%	50V
C518	1-108-567-00	MYLAR	0.0033MF	5%	50V
C519	1-123-306-00	ELECT	47MF	20%	10V
C520	1-123-356-00	ELECT	10MF	20%	16V
C521	1-123-381-00	ELECT	2.2MF	20%	50V
C522	1-123-381-00	ELECT	2.2MF	20%	50V
C523	1-123-381-00	ELECT	2.2MF	20%	50V
C524	1-123-306-00	ELECT	47MF	20%	10V
C525	1-123-356-00	ELECT	10MF	20%	16V
C526	1-108-555-00	MYLAR	0.001MF	5%	50V
C527	1-102-824-00	CERAMIC	430PF	5%	50V
C528	1-123-356-00	ELECT	10MF	20%	16V
C529	1-123-356-00	ELECT	10MF	20%	16V
C530	1-123-307-00	ELECT	100MF	20%	10V
C531	1-123-328-00	ELECT	4.7MF	20%	25V
C532	1-123-328-00	ELECT	4.7MF	20%	25V
C534	1-123-380-00	ELECT	1MF	20%	50V
C537	1-123-356-00	ELECT	10MF	20%	16V
C541	1-108-583-00	MYLAR	0.015MF	5%	50V
C542	1-108-579-00	MYLAR	0.01MF	5%	50V
C543	1-108-599-00	MYLAR	0.068MF	5%	50V
C544	1-102-961-00	CERAMIC	27PF	5%	50V
C545	1-108-555-00	MYLAR	0.001MF	5%	50V
C546	1-123-356-00	ELECT	10MF	20%	16V
C547	1-123-332-00	ELECT	47MF	20%	16V
C549	1-123-356-00	ELECT	10MF	20%	16V
C550	1-123-356-00	ELECT	10MF	20%	16V
C551	1-102-973-00	CERAMIC	100PF	5%	50V
C552	1-123-380-00	ELECT	1MF	20%	50V
C553	1-102-973-00	CERAMIC	100PF	5%	50V
C553	1-108-571-00	MYLAR	0.0047MF	5%	50V
C554	1-102-118-00	CERAMIC	0.0012MF	10%	50V
C555	1-123-356-00	ELECT	10MF	20%	16V
C556	1-123-356-00	ELECT	10MF	20%	16V
C557	1-123-356-00	ELECT	10MF	20%	16V
C558	1-123-356-00	ELECT	10MF	20%	16V
C559	1-123-380-00	ELECT	1MF	20%	50V
C560	1-102-961-00	CERAMIC	27PF	5%	50V
C561	1-123-356-00	ELECT	10MF	20%	16V
C562	1-123-332-00	ELECT	47MF	20%	16V
C563	1-161-021-00	CERAMIC	0.047MF	10%	25V
C564	1-161-021-00	CERAMIC	0.047MF	10%	25V
C565	1-161-021-00	CERAMIC	0.047MF	10%	25V
C566	1-161-021-00	CERAMIC	0.047MF	10%	25V
C567	1-123-356-00	ELECT	10MF	20%	16V
C568	1-161-021-00	CERAMIC	0.047MF	10%	25V
C570	1-123-356-00	ELECT	10MF	20%	16V
C571	1-123-356-00	ELECT	10MF	20%	16V
C583	1-161-021-00	CERAMIC	0.047MF	10%	25V
C591	1-123-294-00	ELECT	47MF	20%	6.3V
C592	1-123-318-00	ELECT	33MF	20%	16V

FILTER

Ref.No	Part No	Description
CF001	1-527-831-00	FILTER, CERAMIC
CF002	1-527-823-00	FILTER, CERAMIC
CF003	1-527-823-00	FILTER, CERAMIC
CF004	1-231-302-00	CERAMIC FILTER (4.27MHZ)

NOTE:

The components identified by shading and mark ⚠ are critical for safety. Replace only with part number specified.

Les composants identifiés par une trame et une marque ⚠ sont critiques pour la sécurité. Ne les remplacer que par une pièce portant le numéro spécifié.

When indicating parts by reference number, please include the board name.

- =>: Due to standardization, interchangeable replacements may be substituted for parts specified in the diagrams.
- Items marked " ♠ " are not stocked since they are seldom required for routine service. Some delay should be anticipated when ordering these items.

- All variable and adjustable resistors have characteristic curve B, unless otherwise noted.

CAPACITORS
- MF : μF, PF : μμF

RESISTORS
- All resistors are in ohms
- F : nonflammable

COILS
- MMH : mH, UH : μH

VA-3 BOARD

Ref.No	Part No	Description	Remark
		CONNECTOR	
CN001♦:	1-560-471-00	PIN, CONNECTOR 10P	
CN002♦:	1-560-461-00	PIN, CONNECTOR 5P	
CN003♦:	1-560-470-00	PIN, CONNECTOR 8P	
CN004♦:	1-560-471-00	PIN, CONNECTOR 10P	
CN005♦:	1-560-469-00	PIN, CONNECTOR 6P	
CN006♦:	1-560-467-00	PIN, CONNECTOR 4P	
CN007	1-561-690-00	CONNECTOR, CAMERA 14P	
CN009♦:	1-560-468-00	PIN, CONNECTOR 5P	
CN011♦:	1-560-470-00	PIN, CONNECTOR 8P	
CN012	1-561-703-00	CONNECTOR, DIN 8P	
CN500♦:	1-560-469-00	PIN, CONNECTOR 6P	
CN505♦:	1-560-466-00	PIN, CONNECTOR 3P	
CN506♦:	1-560-469-00	PIN, CONNECTOR 6P	
CN507♦:	1-560-468-00	PIN, CONNECTOR 5P	
CN509♦:	1-560-469-00	PIN, CONNECTOR 6P	
CN510	1-507-251-XX	JACK	
CN511	1-507-251-XX	JACK	
		TRIMER	
CT500	1-141-215-00	CAP, TRIMER 100PF	
		DIODE	
D001	8-719-911-19	DIODE 1SS119	
D002	8-719-911-19	DIODE 1SS119	
D003	8-719-911-19	DIODE 1SS119	
D004	8-719-911-19	DIODE 1SS119	
D005	8-719-911-19	DIODE 1SS119	
D006	8-719-911-19	DIODE 1SS119	
D007	8-719-911-19	DIODE 1SS119	
D008	8-719-113-07	DIODE RD13E-B	
D009	8-719-113-07	DIODE RD13E-B	
D010	8-719-113-07	DIODE RD13E-B	
D011	8-719-118-07	DIODE RD18E-B	
D012	8-719-118-07	DIODE RD18E-B	
D013	8-719-113-07	DIODE RD13E-B	
D014	8-719-113-07	DIODE RD13E-B	
D015	8-719-113-07	DIODE RD13E-B	
D016	8-719-113-07	DIODE RD13E-B	
D017	8-719-113-07	DIODE RD13E-B	
D018	8-719-911-19	DIODE 1SS119	
D019	8-719-191-07	DIODE RD9.1E-B	
D020	8-719-191-07	DIODE RD9.1E-B	
D021	8-719-911-19	DIODE 1SS119	
D022	8-719-911-19	DIODE 1SS119	
D023	8-719-113-07	DIODE RD13E-B	
D024	8-719-911-19	DIODE 1SS119	
D025	8-719-911-19	DIODE 1SS119	
D500	8-719-911-19	DIODE 1SS119	
D501	8-719-911-19	DIODE 1SS119	
D502	8-719-911-19	DIODE 1SS119	
D503	8-719-911-19	DIODE 1SS119	
D504	8-719-911-19	DIODE 1SS119	
D505	8-719-911-19	DIODE 1SS119	
D506	8-719-911-19	DIODE 1SS119	
D507	8-719-911-19	DIODE 1SS119	
D508	8-719-911-19	DIODE 1SS119	
D510	8-719-911-19	DIODE 1SS119	
D513	8-719-911-19	DIODE 1SS119	
D514	8-719-911-19	DIODE 1SS119	
D515	=>8-719-911-19	DIODE 1SS119	
D516	=>8-719-911-19	DIODE 1SS119	
D517	=>8-719-911-19	DIODE 1SS119	
D518	8-719-911-19	DIODE 1SS119	
D519	8-719-911-19	DIODE 1SS119	
D540	8-719-911-19	DIODE 1SS119	
		DELAY LINE	
DL001	1-415-243-00	DELAY LINE (1H)	
DL002	1-415-065-00	DELAY LINE (1H)	
DL003	1-415-244-21	DELAY LINE (1/2H)	
DL004	1-415-245-00	DELAY LINE (1/4H)	
		IC	
IC001	8-743-945-10	IC BX-3945-1	
IC002	8-743-946-10	IC BX-3946-1	
IC003	8-759-608-64	IC CX-864	
IC004	8-759-608-65	IC CX-865	
IC005	8-758-660-00	IC CX-866	
IC006	8-759-208-67	IC CX-867	
IC007	8-759-908-68	IC CX-868	
IC008	8-758-690-00	IC CX-869	
IC010	8-759-919-05	IC CX-7905A	
IC011	8-743-955-00	IC BX-3955	
IC012	8-743-956-10	IC BX-3956-1	
IC014	8-743-958-10	IC BX-3958-1	
IC015	8-743-959-10	IC BX-3959-1	
IC016	8-759-208-92	IC CX-892	
IC017	8-759-208-94	IC CX-894	
IC018	8-752-000-80	IC CX20008	
IC091	=>8-759-600-08	IC CX-870A	
IC092	8-759-608-82	IC CX-882	
IC500	8-759-240-66	IC TC4066BP	
		COIL	
L001	1-408-620-11	MICRO INDUCTOR 270UH	
L002	1-408-620-11	MICRO INDUCTOR 270UH	
L003	1-408-408-00	MICRO INDUCTOR 8.2UH	
L004	1-408-408-00	MICRO INDUCTOR 8.2UH	
L005	1-408-409-00	MICRO INDUCTOR 10UH	
L006	1-408-427-00	MICRO INDUCTOR 330UH	
L007	1-408-418-00	MICRO INDUCTOR 56UH	
L008	1-408-417-00	MICRO INDUCTOR 47UH	
L009	1-408-414-00	MICRO INDUCTOR 27UH	
L010	1-408-397-00	MICRO INDUCTOR 1UH	

NOTE:

The components identified by shading and mark ⚠ are critical for safety.
Replace only with part number specified.

Les composants identifiés par une trame et une marque ⚠ sont critiques pour la sécurité. Ne les remplacer que par une pièce portant le numéro spécifié.

When indicating parts by reference number, please include the board name.

- =>: Due to standardization, interchangeable replacements may be substituted for parts specified in the diagrams.
- Items marked " ♦ " are not stocked since they are seldom required for routine service. Some delay should be anticipated when ordering these items.

- All variable and adjustable resistors have characteristic curve B, unless otherwise noted.

CAPACITORS
- MF : μF, PF : μμF

RESISTORS
- All resistors are in ohms
- F : nonflammable

COILS
- MMH : mH, UH : μH

Ref.No	Part No	Description	Remark
L011	1-408-397-00	MICRO INDUCTOR 1UH	
L012	1-408-423-00	MICRO INDUCTOR 150UH	
L013	1-408-419-00	MICRO INDUCTOR 68UH	
L014	1-408-418-00	MICRO INDUCTOR 56UH	
L015	1-408-414-00	MICRO INDUCTOR 27UH	
L016	1-408-414-00	MICRO INDUCTOR 27UH	
L017	1-408-402-00	MICRO INDUCTOR 2.7UH	
L019	1-408-401-00	MICRO INDUCTOR 2.2UH	
L021	1-408-422-00	MICRO INDUCTOR 120UH	
L022	1-408-427-00	MICRO INDUCTOR 330UH	
L023	1-408-423-00	MICRO INDUCTOR 150UH	
L024	1-407-502-31	MICRO INDUCTOR 6.8MMH	
L026	1-408-425-00	MICRO INDUCTOR 220UH	
L027	1-408-417-00	MICRO INDUCTOR 47UH	
L029	1-408-421-00	MICRO INDUCTOR 100UH	
L030	1-408-425-00	MICRO INDUCTOR 220UH	
L031	1-408-409-00	MICRO INDUCTOR 10UH	
L033	1-421-381-00	COIL, FERRITE CHOKE	
L034	1-408-414-00	MICRO INDUCTOR 27UH	
L036	1-408-401-00	MICRO INDUCTOR 2.2UH	
L037	1-408-402-00	MICRO INDUCTOR 2.7UH	
L038	1-407-188-XX	MICRO INDUCTOR 6.8UH	
L301	1-408-411-00	MICRO INDUCTOR 15UH	
L500	1-408-429-00	MICRO INDUCTOR 470UH	
L502	1-459-351-00	COIL (WITH CORE)	

VARIABLE COIL

Ref.No	Part No	Description	Remark
LV001	1-408-512-00	COIL (VARIABLE)	
LV500	1-408-524-00	INDUCTOR, ADJ 1.34MMH	
LV501	1-408-523-00	COIL, VARIABLE 22UH	

TRANSISTOR

Ref.No	Part No	Description	Remark
Q001	8-729-178-54	TRANSISTOR 2SC2785	
Q002	8-729-178-54	TRANSISTOR 2SC2785	
Q003	8-729-178-54	TRANSISTOR 2SC2785	
Q004	8-729-178-54	TRANSISTOR 2SC2785	
Q005	8-729-178-54	TRANSISTOR 2SC2785	
Q006	8-729-178-54	TRANSISTOR 2SC2785	
Q007	8-729-178-54	TRANSISTOR 2SC2785	
Q008	8-729-178-54	TRANSISTOR 2SC2785	
Q009	8-729-178-54	TRANSISTOR 2SC2785	
Q010	8-729-178-54	TRANSISTOR 2SC2785	
Q011	8-729-113-32	TRANSISTOR 2SB733	
Q012	8-729-178-54	TRANSISTOR 2SC2785	
Q013	8-729-117-54	TRANSISTOR 2SA1175	
Q014	8-729-117-54	TRANSISTOR 2SA1175	
Q015	8-729-178-54	TRANSISTOR 2SC2785	
Q016	8-729-178-54	TRANSISTOR 2SC2785	
Q017	8-729-178-54	TRANSISTOR 2SC2785	
Q018	8-729-178-54	TRANSISTOR 2SC2785	
Q019	8-729-178-54	TRANSISTOR 2SC2785	
Q020	8-729-178-54	TRANSISTOR 2SC2785	
Q021	8-729-178-54	TRANSISTOR 2SC2785	
Q022	8-729-178-54	TRANSISTOR 2SC2785	
Q023	8-729-178-54	TRANSISTOR 2SC2785	
Q024	8-729-178-54	TRANSISTOR 2SC2785	
Q025	8-729-178-54	TRANSISTOR 2SC2785	
Q026	8-729-178-54	TRANSISTOR 2SC2785	
Q027	8-729-117-54	TRANSISTOR 2SA1175	
Q500	8-729-178-54	TRANSISTOR 2SC2785	
Q501	8-729-178-54	TRANSISTOR 2SC2785	
Q502	8-729-908-62	TRANSISTOR 2SD786	
Q503	=>8-729-612-77	TRANSISTOR 2SA1027R	
Q504	8-729-178-54	TRANSISTOR 2SC2785	
Q505	8-729-178-54	TRANSISTOR 2SC2785	
Q506	8-729-178-54	TRANSISTOR 2SC2785	
Q507	8-729-178-54	TRANSISTOR 2SC2785	
Q509	8-729-178-54	TRANSISTOR 2SC2785	
Q510	8-729-967-32	TRANSISTOR 2SC2673	
Q512	8-729-178-54	TRANSISTOR 2SC2785	
Q513	8-729-178-54	TRANSISTOR 2SC2785	
Q514	=>8-769-200-30	TRANSISTOR 2SK107-3	
Q515	8-729-334-58	TRANSISTOR 2SC1345	
Q516	8-729-178-54	TRANSISTOR 2SC2785	
Q517	8-729-178-54	TRANSISTOR 2SC2785	
Q518	8-729-178-54	TRANSISTOR 2SC2785	
Q519	8-729-178-54	TRANSISTOR 2SC2785	
Q520	8-729-178-54	TRANSISTOR 2SC2785	
Q521	=>8-769-200-30	TRANSISTOR 2SK107-3	
Q522	8-729-178-54	TRANSISTOR 2SC2785	
Q523	8-729-178-54	TRANSISTOR 2SC2785	
Q524	8-729-178-54	TRANSISTOR 2SC2785	
Q525	8-729-178-54	TRANSISTOR 2SC2785	
Q526	8-729-178-54	TRANSISTOR 2SC2785	
Q529	8-729-178-54	TRANSISTOR 2SC2785	
Q530	8-729-178-54	TRANSISTOR 2SC2785	
Q531	8-729-178-54	TRANSISTOR 2SC2785	
Q532	8-729-178-54	TRANSISTOR 2SC2785	
Q533	8-729-178-54	TRANSISTOR 2SC2785	
Q538	8-729-178-54	TRANSISTOR 2SC2785	
Q539	8-729-178-54	TRANSISTOR 2SC2785	
Q540	8-729-178-54	TRANSISTOR 2SC2785	
Q541	8-729-178-54	TRANSISTOR 2SC2785	
Q542	8-729-988-12	TRANSISTOR 2SA881	
Q543	8-729-178-54	TRANSISTOR 2SC2785	
Q544	8-729-967-32	TRANSISTOR 2SC2673	
Q545	8-729-178-54	TRANSISTOR 2SC2785	
Q546	8-729-178-54	TRANSISTOR 2SC2785	
Q547	8-729-178-54	TRANSISTOR 2SC2785	

RESISTOR

Ref.No	Part No	Description			Remark
R001	1-246-843-00	CARBON	910	1/8W	
R002	1-246-848-00	CARBON	2.4K	1/8W	
R003	1-246-787-00	CARBON	2.2K	1/8W	
R004	1-246-843-00	CARBON	910	1/8W	
R006	1-246-780-00	CARBON	560	1/8W	

NOTE:

The components identified by shading and mark ⚠ are critical for safety.
Replace only with part number specified.

Les composants identifiés par une trame et une marque ⚠ sont critiques pour la sécurité.
Ne les remplacer que par une pièce portant le numéro spécifié.

When indicating parts by reference number, please include the board name.

- =>: Due to standardization, interchangeable replacements may be substituted for parts specified in the diagrams.
- Items marked " ♠ " are not stocked since they are seldom required for routine service. Some delay should be anticipated when ordering these items.

- All variable and adjustable resistors have characteristic curve B, unless otherwise noted.

CAPACITORS
- MF : μF, PF : μμF

RESISTORS
- All resistors are in ohms
- F : nonflammable

COILS
- MMH : mH, UH : μH

VA-3 BOARD

Ref.No	Part No	Description			Remark
R007	1-246-807-00	CARBON	100K	1/8W	
R008	1-246-801-00	CARBON	33K	1/8W	
R009	1-246-843-00	CARBON	910	1/8W	
R010	1-246-851-00	CARBON	4.3K	1/8W	
R011	1-246-857-00	CARBON	13K	1/8W	
R012	1-246-808-00	CARBON	120K	1/8W	
R013	1-246-799-00	CARBON	22K	1/8W	
R014	1-246-803-00	CARBON	47K	1/8W	
R015	1-246-795-00	CARBON	10K	1/8W	
R017	1-246-783-00	CARBON	1K	1/8W	
R018	1-246-792-00	CARBON	5.6K	1/8W	
R019	1-246-803-00	CARBON	47K	1/8W	
R020	1-246-809-00	CARBON	150K	1/8W	
R021	1-246-801-00	CARBON	33K	1/8W	
R022	1-246-802-00	CARBON	39K	1/8W	
R023	1-246-786-00	CARBON	1.8K	1/8W	
R024	1-246-802-00	CARBON	39K	1/8W	
R025	1-246-783-00	CARBON	1K	1/8W	
R026	1-246-851-00	CARBON	4.3K	1/8W	
R027	1-246-777-00	CARBON	330	1/8W	
R028	1-246-834-00	CARBON	160	1/8W	
R029	1-246-770-00	CARBON	82	1/8W	
R030	1-246-770-00	CARBON	82	1/8W	
R031	1-246-840-00	CARBON	510	1/8W	
R032	1-246-791-00	CARBON	4.7K	1/8W	
R033	1-246-834-00	CARBON	160	1/8W	
R034	1-246-791-00	CARBON	4.7K	1/8W	
R035	1-246-778-00	CARBON	390	1/8W	
R036	1-246-791-00	CARBON	4.7K	1/8W	
R037	1-246-783-00	CARBON	1K	1/8W	
R038	1-246-803-00	CARBON	47K	1/8W	
R039	1-246-861-00	CARBON	30K	1/8W	
R040	1-246-783-00	CARBON	1K	1/8W	
R041	1-246-844-00	CARBON	1.1K	1/8W	
R042	1-246-844-00	CARBON	1.1K	1/8W	
R043	1-246-792-00	CARBON	5.6K	1/8W	
R044	1-246-783-00	CARBON	1K	1/8W	
R045	1-246-801-00	CARBON	33K	1/8W	
R046	1-246-787-00	CARBON	2.2K	1/8W	
R047	1-246-802-00	CARBON	39K	1/8W	
R048	1-246-799-00	CARBON	22K	1/8W	
R049	1-246-796-00	CARBON	12K	1/8W	
R050	1-246-791-00	CARBON	4.7K	1/8W	
R051	1-246-779-00	CARBON	470	1/8W	
R052	1-246-787-00	CARBON	2.2K	1/8W	
R053	1-246-783-00	CARBON	1K	1/8W	
R054	1-246-795-00	CARBON	10K	1/8W	
R056	1-246-795-00	CARBON	10K	1/8W	
R058	1-246-781-00	CARBON	680	1/8W	
R059	1-246-791-00	CARBON	4.7K	1/8W	
R060	1-246-852-00	CARBON	5.1K	1/8W	
R061	1-246-794-00	CARBON	8.2K	1/8W	
R062	1-246-808-00	CARBON	120K	1/8W	

Ref.No	Part No	Description				Remark
R065	1-246-459-00	CARBON	270	5%	1/4W	
R066	1-246-785-00	CARBON	1.5K		1/8W	
R067	1-246-787-00	CARBON	2.2K		1/8W	
R068	1-246-769-00	CARBON	68		1/8W	
R069	1-246-461-00	CARBON	330	5%	1/4W	
R070	1-246-769-00	CARBON	68		1/8W	
R071	1-246-782-00	CARBON	820		1/8W	
R072	1-246-796-00	CARBON	12K		1/8W	
R073	1-246-843-00	CARBON	910		1/8W	
R074	1-246-840-00	CARBON	510		1/8W	
R075	1-246-844-00	CARBON	1.1K		1/8W	
R076	1-246-835-00	CARBON	200		1/8W	
R077	1-246-804-00	CARBON	56K		1/8W	
R078	1-246-805-00	CARBON	68K		1/8W	
R079	1-246-791-00	CARBON	4.7K		1/8W	
R080	1-246-799-00	CARBON	22K		1/8W	
R081	1-246-809-00	CARBON	150K		1/8W	
R082	1-246-807-00	CARBON	100K		1/8W	
R083	1-246-787-00	CARBON	2.2K		1/8W	
R084	1-246-783-00	CARBON	1K		1/8W	
R085	1-247-048-00	CARBON	390K		1/8W	
R086	1-247-049-00	CARBON	470K		1/8W	
R087	1-246-796-00	CARBON	12K		1/8W	
R088	1-246-847-00	CARBON	2K		1/8W	
R089	1-246-798-00	CARBON	18K		1/8W	
R090	1-246-863-00	CARBON	43K		1/8W	
R091	1-246-782-00	CARBON	820		1/8W	
R092	1-246-797-00	CARBON	15K		1/8W	
R093	1-246-795-00	CARBON	10K		1/8W	
R094	1-246-844-00	CARBON	1.1K		1/8W	
R095	1-246-783-00	CARBON	1K		1/8W	
R097	1-246-834-00	CARBON	160		1/8W	
R099	1-246-771-00	CARBON	100		1/8W	
R100	1-246-777-00	CARBON	330		1/8W	
R103	1-246-789-00	CARBON	3.3K		1/8W	
R104	1-246-791-00	CARBON	4.7K		1/8W	
R105	1-246-799-00	CARBON	22K		1/8W	
R106	1-246-791-00	CARBON	4.7K		1/8W	
R107	1-246-795-00	CARBON	10K		1/8W	
R108	1-246-794-00	CARBON	8.2K		1/8W	
R109	1-246-799-00	CARBON	22K		1/8W	
R110	1-246-799-00	CARBON	22K		1/8W	
R111	1-246-783-00	CARBON	1K		1/8W	
R112	1-246-783-00	CARBON	1K		1/8W	
R113	1-246-785-00	CARBON	1.5K		1/8W	
R114	1-246-810-00	CARBON	180K		1/8W	
R115	1-246-803-00	CARBON	47K		1/8W	
R116	1-246-803-00	CARBON	47K		1/8W	
R117	1-246-863-00	CARBON	43K		1/8W	
R118	1-246-863-00	CARBON	43K		1/8W	
R119	1-246-795-00	CARBON	10K		1/8W	
R120	1-246-792-00	CARBON	5.6K		1/8W	
R121	1-246-864-00	CARBON	51K		1/8W	

NOTE:

The components identified by shading and mark ⚠ are critical for safety. Replace only with part number specified.

Les composants identifiés par une trame et une marque ⚠ sont critiques pour la sécurité. Ne les remplacer que par une pièce portant le numéro spécifié.

When indicating parts by reference number, please include the board name.

- =>: Due to standardization, interchangeable replacements may be substituted for parts specified in the diagrams.
- Items marked " ● " are not stocked since they are seldom required for routine service. Some delay should be anticipated when ordering these items.

- All variable and adjustable resistors have characteristic curve B, unless otherwise noted.

CAPACITORS
- MF : μF, PF : μμF

RESISTORS
- All resistors are in ohms
- F : nonflammable

COILS
- MMH : mH, UH : μH

VA-3 BOARD

Ref.No	Part No	Description			Remark
R122	1-246-801-00	CARBON	33K	1/8W	
R123	1-246-804-00	CARBON	56K	1/8W	
R124	1-246-801-00	CARBON	33K	1/8W	
R125	1-246-801-00	CARBON	33K	1/8W	
R126	1-246-857-00	CARBON	13K	1/8W	
R127	1-246-802-00	CARBON	39K	1/8W	
R128	1-246-807-00	CARBON	100K	1/8W	
R129	1-246-842-00	CARBON	750	1/8W	
R130	1-246-789-00	CARBON	3.3K	1/8W	
R131	1-246-855-00	CARBON	9.1K	1/8W	
R132	1-246-785-00	CARBON	1.5K	1/8W	
R133	1-246-854-00	CARBON	7.5K	1/8W	
R134	1-246-847-00	CARBON	2K	1/8W	
R135	1-246-830-00	CARBON	75	1/8W	
R136	1-246-830-00	CARBON	75	1/8W	
R137	1-246-860-00	CARBON	24K	1/8W	
R138	1-246-841-00	CARBON	620	1/8W	
R139	1-246-783-00	CARBON	1K	1/8W	
R140	1-246-802-00	CARBON	39K	1/8W	
R141	1-246-794-00	CARBON	8.2K	1/8W	
R142	1-246-836-00	CARBON	240	1/8W	
R143	1-246-857-00	CARBON	13K	1/8W	
R144	1-246-865-00	CARBON	62K	1/8W	
R145	1-246-802-00	CARBON	39K	1/8W	
R146	1-246-803-00	CARBON	47K	1/8W	
R148	1-246-850-00	CARBON	3.6K	1/8W	
R149	1-246-850-00	CARBON	3.6K	1/8W	
R206	1-246-775-00	CARBON	220	1/8W	
R207	1-246-801-00	CARBON	33K	1/8W	
R208	1-247-052-00	CARBON	820K	1/8W	
R209	1-247-052-00	CARBON	820K	1/8W	
R211	1-246-789-00	CARBON	3.3K	1/8W	
R212	1-246-787-00	CARBON	2.2K	1/8W	
R213	1-246-783-00	CARBON	1K	1/8W	
R214	1-246-793-00	CARBON	6.8K	1/8W	
R215	1-246-785-00	CARBON	1.5K	1/8W	
R216	1-246-791-00	CARBON	4.7K	1/8W	
R217	1-246-783-00	CARBON	1K	1/8W	
R218	1-246-784-00	CARBON	1.2K	1/8W	
R219	1-246-780-00	CARBON	560	1/8W	
R220	1-246-780-00	CARBON	560	1/8W	
R221	1-246-840-00	CARBON	510	1/8W	
R223	1-246-795-00	CARBON	10K	1/8W	
R224	1-246-854-00	CARBON	7.5K	1/8W	
R225	1-246-851-00	CARBON	4.3K	1/8W	
R226	1-246-871-00	CARBON	200K	1/8W	
R227	1-246-869-00	CARBON	130K	1/8W	
R228	1-246-794-00	CARBON	8.2K	1/8W	
R229	1-246-870-00	CARBON	160K	1/8W	
R230	1-246-771-00	CARBON	100	1/8W	
R231	1-246-779-00	CARBON	470	1/8W	
R232	1-246-783-00	CARBON	1K	1/8W	
R233	1-246-783-00	CARBON	1K	1/8W	
R234	1-246-803-00	CARBON	47K	1/8W	
R235	1-246-803-00	CARBON	47K	1/8W	
R236	1-246-803-00	CARBON	47K	1/8W	
R237	1-246-801-00	CARBON	33K	1/8W	
R238	1-246-801-00	CARBON	33K	1/8W	
R239	1-246-785-00	CARBON	1.5K	1/8W	
R240	1-246-771-00	CARBON	100	1/8W	
R241	1-246-789-00	CARBON	3.3K	1/8W	
R242	1-246-856-00	CARBON	11K	1/8W	
R243	1-246-802-00	CARBON	39K	1/8W	
R244	1-246-783-00	CARBON	1K	1/8W	
R245	1-246-791-00	CARBON	4.7K	1/8W	
R246	1-246-791-00	CARBON	4.7K	1/8W	
R247	1-246-797-00	CARBON	15K	1/8W	
R248	1-246-858-00	CARBON	16K	1/8W	
R249	1-246-805-00	CARBON	68K	1/8W	
R251	1-246-802-00	CARBON	39K	1/8W	
R252	1-246-807-00	CARBON	100K	1/8W	
R253	1-246-771-00	CARBON	100	1/8W	
R254	1-246-837-00	CARBON	300	1/8W	
R255	1-246-837-00	CARBON	300	1/8W	
R256	1-246-839-00	CARBON	430	1/8W	
R257	1-246-803-00	CARBON	47K	1/8W	
R258	1-246-799-00	CARBON	22K	1/8W	
R259	1-246-799-00	CARBON	22K	1/8W	
R260	1-247-048-00	CARBON	390K	1/8W	
R261	1-246-787-00	CARBON	2.2K	1/8W	
R262	1-246-801-00	CARBON	33K	1/8W	
R263	1-246-801-00	CARBON	33K	1/8W	
R264	1-246-852-00	CARBON	5.1K	1/8W	
R266	1-246-799-00	CARBON	22K	1/8W	
R301	1-246-777-00	CARBON	330	1/8W	
R302	1-246-791-00	CARBON	4.7K	1/8W	
R303	1-246-791-00	CARBON	4.7K	1/8W	
R304	1-246-805-00	CARBON	68K	1/8W	
R305	1-246-794-00	CARBON	8.2K	1/8W	
R306	1-246-799-00	CARBON	22K	1/8W	
R307	1-246-859-00	CARBON	20K	1/8W	
R308	1-246-857-00	CARBON	13K	1/8W	
R310	1-246-787-00	CARBON	2.2K	1/8W	
R311	1-246-844-00	CARBON	1.1K	1/8W	
R312	1-246-783-00	CARBON	1K	1/8W	
R313	1-246-859-00	CARBON	20K	1/8W	
R314	1-246-769-00	CARBON	68	1/8W	
R315	1-246-848-00	CARBON	2.4K	1/8W	
R317	1-246-847-00	CARBON	2K	1/8W	
R318	1-246-771-00	CARBON	100	1/8W	
R320	1-246-851-00	CARBON	4.3K	1/8W	
R321	1-246-801-00	CARBON	33K	1/8W	
R322	1-246-801-00	CARBON	33K	1/8W	
R323	1-246-795-00	CARBON	10K	1/8W	
R324	1-246-801-00	CARBON	33K	1/8W	
R325	1-246-795-00	CARBON	10K	1/8W	

NOTE:

The components identified by shading and mark ⚠ are critical for safety. Replace only with part number specified.

Les composants identifiés par une trame et une marque ⚠ sont critiques pour la sécurité. Ne les remplacer que par une pièce portant le numéro spécifié.

When indicating parts by reference number, please include the board name.

- =>: Due to standardization, interchangeable replacements may be substituted for parts specified in the diagrams.
- Items marked " ♠ " are not stocked since they are seldom required for routine service. Some delay should be anticipated when ordering these items.
- All variable and adjustable resistors have characteristic curve B, unless otherwise noted.

CAPACITORS
- MF : μF, PF : μμF

RESISTORS
- All resistors are in ohms
- F : nonflammable

COILS
- MMH : mH, UH : μH

VA-3 BOARD

Ref.No	Part No	Description				Remark
R326	1-246-789-00	CARBON	3.3K		1/8W	
R500	1-246-759-00	CARBON	10		1/8W	
R501	1-246-803-00	CARBON	47K		1/8W	
R502	1-246-801-00	CARBON	33K		1/8W	
R503	1-246-803-00	CARBON	47K		1/8W	
R504	1-246-801-00	CARBON	33K		1/8W	
R506	1-246-543-00	CARBON	820K	5%	1/4W	
R507	1-246-513-00	CARBON	47K	5%	1/4W	
R508	1-246-800-00	CARBON	27K		1/8W	
R509	1-246-791-00	CARBON	4.7K		1/8W	
R510	1-246-869-00	CARBON	130K		1/8W	
R511	1-246-521-00	CARBON	100K	5%	1/4W	
R512	1-246-768-00	CARBON	56		1/8W	
R513	1-246-797-00	CARBON	15K		1/8W	
R514	1-246-795-00	CARBON	10K		1/8W	
R515	1-246-852-00	CARBON	5.1K		1/8W	
R516	1-246-846-00	CARBON	1.6K		1/8W	
R517	1-246-796-00	CARBON	12K		1/8W	
R518	1-246-799-00	CARBON	22K		1/8W	
R519	1-246-801-00	CARBON	33K		1/8W	
R520	1-246-801-00	CARBON	33K		1/8W	
R521	1-246-796-00	CARBON	12K		1/8W	
R522	1-246-798-00	CARBON	18K		1/8W	
R523	1-246-793-00	CARBON	6.8K		1/8W	
R525	1-246-801-00	CARBON	33K		1/8W	
R526	1-246-771-00	CARBON	100		1/8W	
R527	1-246-795-00	CARBON	10K		1/8W	
R528	1-246-797-00	CARBON	15K		1/8W	
R531 ⚠	1-246-980-00	CARBON	3.3	5%	1/8W	F
R532	1-246-771-00	CARBON	100		1/8W	
R533	1-246-795-00	CARBON	10K		1/8W	
R534	1-246-797-00	CARBON	15K		1/8W	
R535	1-246-804-00	CARBON	56K		1/8W	
R536	1-246-804-00	CARBON	56K		1/8W	
R537	1-246-795-00	CARBON	10K		1/8W	
R538	1-246-807-00	CARBON	100K		1/8W	
R539	1-246-866-00	CARBON	75K		1/8W	
R540	1-246-866-00	CARBON	75K		1/8W	
R541	1-246-807-00	CARBON	100K		1/8W	
R542	1-246-807-00	CARBON	100K		1/8W	
R543	1-246-807-00	CARBON	100K		1/8W	
R544	1-246-783-00	CARBON	1K		1/8W	
R545	1-246-783-00	CARBON	1K		1/8W	
R546	1-246-803-00	CARBON	47K		1/8W	
R547	1-246-803-00	CARBON	47K		1/8W	
R548	1-246-799-00	CARBON	22K		1/8W	
R549	1-246-804-00	CARBON	56K		1/8W	
R550	1-246-795-00	CARBON	10K		1/8W	
R551	1-246-811-00	CARBON	220K		1/8W	
R552	1-246-807-00	CARBON	100K		1/8W	
R553	1-246-834-00	CARBON	160		1/8W	
R554	1-246-795-00	CARBON	10K		1/8W	
R555	1-246-811-00	CARBON	220K		1/8W	
R556	1-246-795-00	CARBON	10K		1/8W	
R557	1-246-783-00	CARBON	1K		1/8W	
R558	1-246-803-00	CARBON	47K		1/8W	
R559	1-246-801-00	CARBON	33K		1/8W	
R560	1-246-801-00	CARBON	33K		1/8W	
R561	1-246-791-00	CARBON	4.7K		1/8W	
R562	1-247-047-00	CARBON	330K		1/8W	
R563	1-246-799-00	CARBON	22K		1/8W	
R564	1-246-792-00	CARBON	5.6K		1/8W	
R565	1-202-469-00	COMPOSITION	3.9M	5%	1/4W	
R566	1-246-795-00	CARBON	10K		1/8W	
R567	1-246-771-00	CARBON	100		1/8W	
R568	1-246-799-00	CARBON	22K		1/8W	
R569	1-246-799-00	CARBON	22K		1/8W	
R570	1-246-792-00	CARBON	5.6K		1/8W	
R571	1-246-795-00	CARBON	10K		1/8W	
R572	1-246-795-00	CARBON	10K		1/8W	
R573	1-246-795-00	CARBON	10K		1/8W	
R574	1-246-867-00	CARBON	91K		1/8W	
R575	1-246-793-00	CARBON	6.8K		1/8W	
R577	1-246-793-00	CARBON	6.8K		1/8W	
R578	1-247-049-00	CARBON	470K		1/8W	
R579	1-246-787-00	CARBON	2.2K		1/8W	
R581	1-246-789-00	CARBON	3.3K		1/8W	
R584	1-246-788-00	CARBON	2.7K		1/8W	
R585	1-246-852-00	CARBON	5.1K		1/8W	
R586	1-246-843-00	CARBON	910		1/8W	
R592	1-246-795-00	CARBON	10K		1/8W	
R593	1-246-795-00	CARBON	10K		1/8W	
R594	1-246-796-00	CARBON	12K		1/8W	
R595	1-246-793-00	CARBON	6.8K		1/8W	
R596	1-246-805-00	CARBON	68K		1/8W	
R597	1-246-797-00	CARBON	15K		1/8W	
R598	1-246-796-00	CARBON	12K		1/8W	
R599	1-246-861-00	CARBON	30K		1/8W	
R600	1-246-860-00	CARBON	24K		1/8W	
R601	1-246-792-00	CARBON	5.6K		1/8W	
R602	1-246-791-00	CARBON	4.7K		1/8W	
R603	1-246-780-00	CARBON	560		1/8W	
R604	1-246-786-00	CARBON	1.8K		1/8W	
R605	1-246-799-00	CARBON	22K		1/8W	
R606	1-246-801-00	CARBON	33K		1/8W	
R607	1-246-771-00	CARBON	100		1/8W	
R608	1-246-783-00	CARBON	1K		1/8W	
R610	1-246-793-00	CARBON	6.8K		1/8W	
R611	1-247-047-00	CARBON	330K		1/8W	
R612	1-246-795-00	CARBON	10K		1/8W	
R613	1-246-791-00	CARBON	4.7K		1/8W	
R614	1-246-801-00	CARBON	33K		1/8W	
R615	1-246-793-00	CARBON	6.8K		1/8W	
R616	1-246-797-00	CARBON	15K		1/8W	
R617	1-246-787-00	CARBON	2.2K		1/8W	
R618	1-246-811-00	CARBON	220K		1/8W	

NOTE:

The components identified by shading and mark ⚠ are critical for safety.
Replace only with part number specified.

Les composants identifiés par une trame et une marque ⚠ sont critiques pour la sécurité. Ne les remplacer que par une pièce portant le numéro spécifié.

When indicating parts by reference number, please include the board name.

- =>: Due to standardization, interchangeable replacements may be substituted for parts specified in the diagrams.
- Items marked " ♠ " are not stocked since they are seldom required for routine service. Some delay should be anticipated when ordering these items.

- All variable and adjustable resistors have characteristic curve B, unless otherwise noted.

CAPACITORS
- MF : μF, PF : μμF

RESISTORS
- All resistors are in ohms
- F : nonflammable

COILS
- MMH : mH, UH : μH

Ref.No	Part No	Description			Remark
R619	1-246-807-00	CARBON	100K	1/8W	
R620	1-246-811-00	CARBON	220K	1/8W	
R621	1-246-807-00	CARBON	100K	1/8W	
R622	1-246-807-00	CARBON	100K	1/8W	
R623	1-246-811-00	CARBON	220K	1/8W	
R624	1-246-807-00	CARBON	100K	1/8W	
R625	1-246-787-00	CARBON	2.2K	1/8W	
R626	1-246-797-00	CARBON	15K	1/8W	
R627	1-246-783-00	CARBON	1K	1/8W	
R628	1-246-783-00	CARBON	1K	1/8W	
R629	1-246-783-00	CARBON	1K	1/8W	
R630	1-246-791-00	CARBON	4.7K	1/8W	
R631	1-246-784-00	CARBON	1.2K	1/8W	
R632	1-246-796-00	CARBON	12K	1/8W	
R633	1-246-791-00	CARBON	4.7K	1/8W	
R634	1-246-801-00	CARBON	33K	1/8W	
R635	1-246-799-00	CARBON	22K	1/8W	
R636	1-246-807-00	CARBON	100K	1/8W	
R638	1-246-780-00	CARBON	560	1/8W	
R639	1-246-829-00	CARBON	62	1/8W	
R640	1-246-783-00	CARBON	1K	1/8W	
R641	1-246-792-00	CARBON	5.6K	1/8W	
R642	1-246-797-00	CARBON	15K	1/8W	
R643	1-246-791-00	CARBON	4.7K	1/8W	
R647	1-246-801-00	CARBON	33K	1/8W	
R648	1-246-801-00	CARBON	33K	1/8W	
R649	1-247-053-00	CARBON	1M	1/8W	
R650	1-246-783-00	CARBON	1K	1/8W	
R651	1-246-787-00	CARBON	2.2K	1/8W	
R652	1-246-787-00	CARBON	2.2K	1/8W	
R653	1-246-801-00	CARBON	33K	1/8W	
R654	1-246-807-00	CARBON	100K	1/8W	
R655	1-246-783-00	CARBON	1K	1/8W	
		VARIABLE RESISTOR			
RV001	1-224-249-XX	RES, ADJ, SOLID 1K			
RV003	1-224-250-XX	RES, ADJ, SOLID 2.2K			
RV004	1-224-251-XX	RES, ADJ, SOLID 4.7K			
RV005	1-224-250-XX	RES, ADJ, SOLID 2.2K			
RV006	1-224-249-XX	RES, ADJ, SOLID 1K			
RV007	1-224-249-XX	RES, ADJ, SOLID 1K			
RV008	1-224-250-XX	RES, ADJ, SOLID 2.2K			
RV009	1-224-251-XX	RES, ADJ, SOLID 4.7K			
RV010	1-224-251-XX	RES, ADJ, SOLID 4.7K			
RV011	1-224-251-XX	RES, ADJ, SOLID 4.7K			
RV012	1-224-251-XX	RES, ADJ, SOLID 4.7K			
RV013	1-224-252-XX	RES, ADJ, SOLID 10K			
RV014	1-224-252-XX	RES, ADJ, SOLID 10K			
RV015	1-224-250-XX	RES, ADJ, SOLID 2.2K			
RV016	1-224-251-XX	RES, ADJ, SOLID 4.7K			
RV017	1-224-248-XX	RES, ADJ, SOLID 470			
RV019	1-224-254-XX	RES, ADJ, SOLID 47K			
RV020	1-224-254-XX	RES, ADJ, SOLID 47K			

Ref.No	Part No	Description	Remark
RV021	1-224-250-XX	RES, ADJ, SOLID 2.2K	
RV022	1-224-251-XX	RES, ADJ, SOLID 4.7K	
RV025	1-224-252-XX	RES, ADJ, SOLID 10K	
RV026	1-224-254-XX	RES, ADJ, SOLID 47K	
RV027	1-224-248-XX	RES, ADJ, SOLID 470	
RV028	1-224-248-XX	RES, ADJ, SOLID 470	
RV029	1-224-250-XX	RES, ADJ, SOLID 2.2K	
RV030	1-224-251-XX	RES, ADJ, SOLID 4.7K	
RV500	1-224-254-XX	RES, ADJ, SOLID 47K	
RV501	1-224-255-XX	RES, ADJ, SOLID 100K	
RV502	1-224-251-XX	RES, ADJ, SOLID 4.7K	
		RELAY	
RY501	1-515-418-00	RELAY	
RY502	1-515-416-00	RELAY	
		SWITCH	
SW001	1-552-821-00	SWITCH, SLIDE	
		TRANSFORMER	
T001	1-235-057-00	FILTER, BAND PASS	
T002	1-426-065-00	COIL, BPF-1	
T003	1-426-070-00	COIL (EQT)	
T004	1-409-352-00	COIL, TRAP	
T005	1-409-353-00	COIL, TRAP	
T006	1-231-412-00	FILTER BLOCK	
T007	1-426-089-00	COIL (EQT)	
T500	1-433-236-00	TRANSFORMER, OSCILLATOR	
		CONNECTOR	
VCN013	1-507-742-00	JACK, PIN 2P	
		CRYSTAL	
X001	1-527-396-00	CRYSTAL, OSC	

****

♠:1-606-272-00 MI-2 BOARD
****

		CONNECTOR	
CN501	1-507-285-00	JACK	

****

♠:A-6711-323-A VL-3 BOARD, COMPLETE
****

	1-246-795-00	CARBON	10K	1/8W	
	1-246-795-00	CARBON	10K	1/8W	
		CAPACITOR			
C001	1-123-306-00	ELECT	47MF	20%	10V

NOTE: The components identified by shading and mark ⚠ are critical for safety. Replace only with part number specified.

Les composants identifiés par une trame et une marque ⚠ sont critiques pour la sécurité. Ne les remplacer que par une pièce portant le numéro spécifié.

When indicating parts by reference number, please include the board name.

- =>: Due to standardization, interchangeable replacements may be substituted for parts specified in the diagrams.
- Items marked " ♠ " are not stocked since they are seldom required for routine service. Some delay should be anticipated when ordering these items.
- All variable and adjustable resistors have characteristic curve B, unless otherwise noted.

CAPACITORS
- MF : μF, PF : μμF

RESISTORS
- All resistors are in ohms
- F : nonflammable

COILS
- MMH : mH, UH : μH

VL-3 BOARD

Ref.No	Part No	Description			Remark
C002	1-123-616-00	ELECT	4.7MF	20%	25V
C003	1-123-617-00	ELECT	10MF	20%	16V
C004	1-130-022-DD	FILM	0.0022MF	5%	50V
C005	1-161-013-00	CERAMIC	0.01MF	10%	25V
C006	1-123-617-00	ELECT	10MF	20%	16V
C007	1-130-532-51	MYLAR	0.22MF	10%	50V
C008	1-123-617-00	ELECT	10MF	20%	16V
C009	1-123-617-00	ELECT	10MF	20%	16V
C010	1-102-074-00	CERAMIC	0.001MF	10%	50V
C011	1-131-404-00	ELECT(SOLID)	0.22MF	10%	25V
C012	1-102-126-00	CERAMIC	0.0056MF	10%	50V
C013	1-123-616-00	ELECT	4.7MF	20%	25V
C014	1-161-013-00	CERAMIC	0.01MF	10%	25V
C015	1-123-306-00	ELECT	47MF	20%	10V
C016	1-123-645-00	ELECT	33MF	20%	10V
C017	1-123-617-00	ELECT	10MF	20%	16V
C018	1-123-617-00	ELECT	10MF	20%	16V
C019	1-123-617-00	ELECT	10MF	20%	16V
C020	1-123-617-00	ELECT	10MF	20%	16V
C021	1-102-118-00	CERAMIC	0.0012MF	10%	50V
C022	1-123-617-00	ELECT	10MF	20%	16V
C023	1-123-617-00	ELECT	10MF	20%	16V
C024	1-131-404-00	ELECT(SOLID)	0.22MF	10%	25V
C025	1-130-029-00	FILM	0.0082MF	5%	50V
C026	1-130-025-00	FILM	0.0039MF	5%	50V
C027	1-123-622-00	ELECT	22MF	20%	16V
C028	1-123-306-00	ELECT	47MF	20%	10V
C029	1-161-013-00	CERAMIC	0.01MF	10%	25V
C030	1-131-342-00	ELECT(SOLID)	0.15MF	10%	25V
C031	1-161-013-00	CERAMIC	0.01MF	10%	25V
C032	1-123-307-00	ELECT	100MF	20%	10V
C033	1-130-028-00	FILM	0.0068MF	5%	50V
C034	1-130-025-00	FILM	0.0039MF	5%	50V
C035	1-130-481-00	MYLAR	0.0068MF	5%	50V
C036	1-131-342-00	ELECT(SOLID)	0.15MF	10%	25V
C037	1-123-306-00	ELECT	47MF	20%	10V
C038	1-130-524-51	MYLAR	0.047MF	10%	50V
C040	1-123-306-00	ELECT	47MF	20%	10V
C041	1-123-613-00	ELECT	3.3MF	20%	50V
C042	1-161-034-00	CERAMIC	0.022MF	20%	25V
C043	1-102-121-00	CERAMIC	0.0022MF	10%	50V
C044	1-123-617-00	ELECT	10MF	20%	16V
C045	1-131-345-00	ELECT(SOLID)	0.47MF	10%	25V
C046	1-131-345-00	ELECT(SOLID)	0.47MF	10%	25V
C047	1-123-617-00	ELECT	10MF	20%	16V
C048	1-130-524-51	MYLAR	0.047MF	10%	50V
C049	1-131-407-00	ELECT(SOLID)	0.68MF	10%	25V
C050	1-102-074-00	CERAMIC	0.001MF	10%	50V
C051	1-123-617-00	ELECT	10MF	20%	16V

CONNECTOR

Ref.No	Part No	Description	Remar
CN001♠:	1-560-472-00	PIN, CONNECTOR 12P	
CN002♠:	1-560-472-00	PIN, CONNECTDR 12P	
CN003♠:	1-560-470-00	PIN, CONNECTOR 8P	
CN004♠:	1-560-466-00	PIN, CONNECTOR 3P	

COMPOSITION CIRCUIT BLOCK

Ref.No	Part No	Description
CP002	1-231-810-00	COMPOSITION CIRCUIT BLOCK
CP003	1-231-628-00	COMPOSITION CIRCUIT BLOCK
CP004	1-231-628-00	COMPOSITION CIRCUIT BLOCK
CP005	1-231-796-21	COMPOSITION CIRCUIT BLOCK
CP006	1-231-628-00	COMPOSITION CIRCUIT BLOCK
CP007	1-231-628-00	COMPOSITION CIRCUIT BLOCK
CP008	1-232-131-00	COMPOSITION CIRCUIT BLOCK
CP009	1-232-133-00	COMPOSITION CIRCUIT BLOCK
CP010	1-231-628-0D	COMPOSITION CIRCUIT BLOCK
CP011	1-232-173-00	COMPOSITION CIRCUIT BLOCK
CP012	1-232-174-00	COMPOSITION CIRCUIT BLOCK
CP013	1-232-175-00	COMPOSITION CIRCUIT BLOCK
CP014	1-231-773-00	COMPOSITION CIRCUIT BLOCK
CP015	1-231-886-00	COMPOSITION CIRCUIT BLOCK
CP016	1-231-628-00	COMPOSITION CIRCUIT BLOCK
CP017	1-232-176-0D	COMPOSITION CIRCUIT BLOCK
CP018	1-232-177-00	COMPOSITION CIRCUIT BLOCK
CP019	1-232-178-00	COMPOSITION CIRCUIT BLOCK
CP020	1-232-175-00	COMPOSITION CIRCUIT BLOCK

DIODE

Ref.No	Part No	Description
D003	=>8-719-911-19	DIODE 1SS119
D004	=>8-719-911-19	DIODE 1SS119
D005	=>8-719-911-19	DIODE 1SS119
D006	=>8-719-911-19	DIODE 1SS119
D007	=>8-719-911-19	DIODE 1SS119
D009	=>8-719-911-19	DIODE 1SS119
D010	=>8-719-911-19	DIODE 1SS119
D013	=>8-719-911-19	DIODE 1SS119
D014	=>8-719-911-19	DIODE 1SS119
D015	=>8-719-911-19	DIODE 1SS119

IC

Ref.No	Part No	Description
IC001	8-759-132-40	IC UPC324C
IC002	8-759-132-40	IC UPC324C
IC003	8-759-132-40	IC UPC324C
IC004	8-759-240-30	IC TC4030BP
IC005	8-741-104-10	IC BX-1041
IC006	8-759-240-66	IC TC4066BP
IC007	8-759-240-13	IC TC4013BP
IC008	8-759-240-81	IC TC4081BP
IC009	=>8-759-345-38	IC HD14538BP
IC010	8-759-240-11	IC TC4011BP
IC011	8-759-240-11	IC TC4011BP
IC012	8-759-240-81	IC TC4081BP
IC013	8-759-240-11	IC TC4011BP
IC014	8-759-240-69	IC TC4069UBP

NOTE:

The components identified by shading and mark ⚠ are critical for safety.
Replace only with part number specified.

Les composants identifiés par une trame et une marque ⚠ sont critiques pour la sécurité. Ne les remplacer que par une pièce portant le numéro spécifié.

When indicating parts by reference number, please include the board name.

- =>: Due to standardization, interchangeable replacements may be substituted for parts specified in the diagrams.
- Items marked " ♠ " are not stocked since they are seldom required for routine service. Some delay should be anticipated when ordering these items.

- All variable and adjustable resistors have characteristic curve B, unless otherwise noted.

CAPACITORS
- MF : μF, PF : μμF

RESISTORS
- All resistors are in ohms
- F : nonflammable

COILS
- MMH : mH, UH : μH

VL-3 BOARD

TRANSISTOR

Ref.No	Part No	Description	Remark
Q001	8-729-993-72	TRANSISTOR 2SA937	
Q002	8-729-178-54	TRANSISTOR 2SC2785	
Q003	8-729-178-54	TRANSISTOR 2SC2785	
Q004	8-729-178-54	TRANSISTOR 2SC2785	
Q005	8-729-117-54	TRANSISTOR 2SA1175	
Q006	8-729-178-54	TRANSISTOR 2SC2785	
Q007	8-729-993-72	TRANSISTOR 2SA937	
Q008	8-729-178-54	TRANSISTOR 2SC2785	
Q009	8-729-178-54	TRANSISTOR 2SC2785	
Q010	8-729-117-54	TRANSISTOR 2SA1175	
Q012	8-729-178-54	TRANSISTOR 2SC2785	
Q013	8-729-178-54	TRANSISTOR 2SC2785	
Q014	8-729-117-54	TRANSISTOR 2SA1175	
Q015	8-729-117-54	TRANSISTOR 2SA1175	
Q016	8-729-178-54	TRANSISTOR 2SC2785	
Q017	8-729-178-54	TRANSISTOR 2SC2785	
Q018	8-729-902-11	TRANSISTOR 2SC2021	
Q019	8-729-178-54	TRANSISTOR 2SC2785	
Q020	8-729-178-54	TRANSISTOR 2SC2785	
Q021	8-729-178-54	TRANSISTOR 2SC2785	
Q022	8-729-117-54	TRANSISTOR 2SA1175	
Q023	8-729-117-54	TRANSISTOR 2SA1175	
Q024	8-729-178-54	TRANSISTOR 2SC2785	
Q025	8-729-178-54	TRANSISTOR 2SC2785	
Q026	8-729-117-54	TRANSISTOR 2SA1175	
Q027	8-729-117-54	TRANSISTOR 2SA1175	
Q028	8-729-117-54	TRANSISTOR 2SA1175	
Q029	8-729-117-54	TRANSISTOR 2SA1175	
Q030	=>8-729-902-11	TRANSISTOR 2SC2021	
Q031	8-729-117-54	TRANSISTOR 2SA1175	
Q032	8-729-902-11	TRANSISTOR 2SC2021	
Q033	8-729-117-54	TRANSISTOR 2SA1175	
Q034	8-729-117-54	TRANSISTOR 2SA1175	
Q035	8-729-117-54	TRANSISTOR 2SA1175	
Q036	8-729-117-54	TRANSISTOR 2SA1175	
Q037	8-729-178-54	TRANSISTOR 2SC2785	

RESISTOR

Ref.No	Part No	Description				Remark
R001	1-246-803-00	CARBON	47K		1/8W	
R002	1-246-803-00	CARBON	47K		1/8W	
R003	1-214-154-00	METAL	8.2K	1%	1/4W	
R004	1-214-156-00	METAL	10K	1%	1/4W	
R005	1-246-791-00	CARBON	4.7K		1/8W	
R006	1-247-053-00	CARBON	1M		1/8W	
R011	1-246-791-00	CARBON	4.7K		1/8W	
R012	1-247-053-00	CARBON	1M		1/8W	
R013	1-246-792-00	CARBON	5.6K		1/8W	
R014	1-246-799-00	CARBON	22K		1/8W	
R015	1-246-803-00	CARBON	47K		1/8W	
R016	1-246-807-00	CARBON	100K		1/8W	
R017	1-246-852-00	CARBON	5.1K		1/8W	
R020	1-246-846-00	CARBON	1.6K		1/8W	
R021	1-246-851-00	CARBON	4.3K		1/8W	
R022	1-246-807-00	CARBON	100K		1/8W	
R023	1-246-864-00	CARBON	51K		1/8W	
R024	1-246-807-00	CARBON	100K		1/8W	
R025	1-246-807-00	CARBON	100K		1/8W	
R026	1-246-795-00	CARBON	10K		1/4W	
R032	1-246-781-00	CARBON	680		1/8W	
R033	1-246-807-00	CARBON	100K		1/8W	
R037	1-246-807-00	CARBON	100K		1/8W	
R038	1-214-140-00	METAL	2.2K	1%	1/4W	
R039	1-214-156-00	METAL	10K	1%	1/4W	
R040	1-214-168-00	METAL	33K	1%	1/4W	
R041	1-246-803-00	CARBON	47K		1/8W	
R043	1-247-053-00	CARBON	1M		1/8W	
R044	1-247-053-00	CARBON	1M		1/8W	
R045	1-246-765-00	CARBON	33		1/8W	
R047	1-246-807-00	CARBON	100K		1/8W	
R048	1-246-844-00	CARBON	1.1K		1/8W	
R049	1-246-846-00	CARBON	1.6K		1/8W	
R050	1-246-846-00	CARBON	1.6K		1/8W	
R052	1-246-791-00	CARBON	4.7K		1/8W	
R053	1-246-801-00	CARBON	33K		1/8W	
R055	1-247-053-00	CARBON	1M		1/8W	
R058	1-246-792-00	CARBON	5.6K		1/8W	
R061	1-246-848-00	CARBON	2.4K		1/8W	
R062	1-246-803-00	CARBON	47K		1/8W	
R063	1-246-783-00	CARBON	1K		1/8W	
R064	1-246-783-00	CARBON	1K		1/8W	
R065	1-246-783-00	CARBON	1K		1/8W	
R066	1-246-804-00	CARBON	56K		1/8W	
R067	1-246-804-00	CARBON	56K		1/8W	
R068	1-246-807-00	CARBON	100K		1/8W	
R069	1-246-803-00	CARBON	47K		1/8W	
R070	1-246-850-00	CARBON	3.6K		1/8W	
R071	1-246-805-00	CARBON	68K		1/8W	
R072	1-246-804-00	CARBON	56K		1/8W	
R073	1-246-804-00	CARBON	56K		1/8W	
R074	1-246-803-00	CARBON	47K		1/8W	
R075	1-246-795-00	CARBON	10K		1/8W	
R076	1-246-795-00	CARBON	10K		1/8W	
R077	1-246-807-00	CARBON	100K		1/8W	
R078	1-246-807-00	CARBON	100K		1/8W	
R080	1-246-803-00	CARBON	47K		1/8W	
R084	1-246-791-00	CARBON	4.7K		1/8W	
R085	1-246-807-00	CARBON	100K		1/8W	
R086	1-214-780-00	METAL	130K	1%	1/4W	
R087	1-214-786-00	METAL	240K	1%	1/4W	
R088	1-246-775-00	CARBON	220		1/8W	
R089	1-246-805-00	CARBON	68K		1/8W	
R090	1-246-803-00	CARBON	47K		1/8W	
R091	1-246-803-00	CARBON	47K		1/8W	
R092	1-247-053-00	CARBON	1M		1/8W	

NOTE:

The components identified by shading and mark ⚠ are critical for safety.
Replace only with part number specified.

Les composants identifiés par une trame et une marque ⚠ sont critiques pour la sécurité.
Ne les remplacer que par une pièce portant le numéro spécifié.

When indicating parts by reference number, please include the board name.

- =>: Due to standardization, interchangeable replacements may be substituted for parts specified in the diagrams.
- Items marked " ♠ " are not stocked since they are seldom required for routine service. Some delay should be anticipated when ordering these items.
- All variable and adjustable resistors have characteristic curve B, unless otherwise noted.

CAPACITORS
- MF : μF, PF : μμF

RESISTORS
- All resistors are in ohms
- F : nonflammable

COILS
- MMH : mH, UH : μH

VL-3 BOARD

SS-10A BOARD

Ref.No	Part No	Description				Remark
R093	1-246-777-00	CARBON	330		1/8W	
R094	1-246-803-00	CARBON	47K		1/8W	
R095	1-246-803-00	CARBON	47K		1/8W	
R096	1-246-807-00	CARBON	100K		1/8W	
R097	1-246-807-00	CARBON	100K		1/8W	
R100	1-246-771-00	CARBON	100		1/8W	
R101	1-246-795-00	CARBON	10K		1/8W	
R102	1-246-783-00	CARBON	1K		1/8W	
R103	1-246-795-00	CARBON	10K		1/8W	
R104	1-246-795-00	CARBON	10K		1/8W	
R105	1-246-803-00	CARBON	47K		1/8W	
R106	1-214-174-00	METAL	56K	1%	1/4W	
R107	1-214-178-00	METAL	82K	1%	1/4W	
R108	1-214-150-00	METAL	5.6K	1%	1/4W	
R109	1-246-783-00	CARBON	1K		1/8W	
R110	1-246-807-00	CARBON	100K		1/8W	
R111	1-246-799-00	CARBON	22K		1/8W	
R112	1-246-807-00	CARBON	100K		1/8W	
R113	1-214-163-00	METAL	20K	1%	1/4W	
R114	1-214-167-00	METAL	30K	1%	1/4W	
R115	1-246-790-00	CARBON	3.9K		1/8W	
R116	1-246-807-00	CARBON	100K		1/8W	
R117	1-214-142-00	METAL	2.7K	1%	1/4W	
R118	1-214-132-00	METAL	1K	1%	1/4W	
R121	1-246-803-00	CARBON	47K		1/8W	
R122	1-246-803-00	CARBON	47K		1/8W	
R123	1-246-802-00	CARBON	39K		1/8W	
R124	1-246-795-00	CARBON	10K		1/8W	
R125	1-246-857-00	CARBON	13K		1/8W	
R126	1-246-801-00	CARBON	33K		1/8W	
R127	1-246-803-00	CARBON	47K		1/8W	
R128	1-246-783-00	CARBON	1K		1/8W	
R129	1-246-861-00	CARBON	30K		1/8W	
R130	1-246-857-00	CARBON	13K		1/8W	
R131	1-214-156-00	METAL	10K	1%	1/4W	
R132	1-246-803-00	CARBON	47K		1/8W	
R133	1-246-851-00	CARBON	4.3K		1/8W	
R134	1-246-795-00	CARBON	10K		1/8W	
R135	1-246-803-00	CARBON	47K		1/8W	
R136	1-246-803-00	CARBON	47K		1/8W	
R137	1-246-778-00	CARBON	390		1/8W	
R138	1-246-807-00	CARBON	100K		1/8W	
R139	1-214-145-00	METAL	3.6K	1%	1/4W	
R140	1-246-807-00	CARBON	100K		1/8W	
R141	1-246-807-00	CARBON	100K		1/8W	
R142	1-214-134-00	METAL	1.2K	1%	1/4W	
R146	1-246-807-00	CARBON	100K		1/8W	
R147	1-246-807-00	CARBON	100K		1/8W	
R148	1-214-158-00	METAL	12K	1%	1/4W	
R149	1-214-153-00	METAL	7.5K	1%	1/4W	
R154	1-246-783-00	CARBON	1K		1/8W	
R156	1-246-869-00	CARBON	130K		1/8W	
R157	1-246-807-00	CARBON	100K		1/8W	
R158	1-246-783-00	CARBON	1K		1/8W	
R159	1-246-807-00	CARBON	100K		1/8W	
R160	1-246-807-00	CARBON	100K		1/8W	
R161	1-246-850-00	CARBON	3.6K		1/8W	
R162	1-214-152-00	METAL	6.8K	1%	1/4W	
R164	1-246-791-00	CARBON	4.7K		1/8W	
R171	1-246-807-00	CARBON	100K		1/8W	

VARIABLE RESISTOR

RV001	1-224-252-XX	RES, ADJ, METAL GLAZE 10K
RV002	1-226-773-00	RES, ADJ, METAL GLAZE 22K
RV003	1-224-251-XX	RES, ADJ, METAL GLAZE 4.7K
RV004	1-224-253-XX	RES, ADJ, METAL GLAZE 22K
RV005	1-224-253-XX	RES, ADJ, METAL GLAZE 22K
RV006	1-224-256-XX	RES, ADJ, METAL GLAZE 220K
RV007	1-224-256-XX	RES, ADJ, METAL GLAZE 220K
RV008	1-224-256-XX	RES, ADJ, METAL GLAZE 220K
RV009	1-224-256-XX	RES, ADJ, METAL GLAZE 220K
RV010	1-226-703-00	RES, ADJ, METAL GLAZE 10K
RV011	1-226-775-00	RES, ADJ, METAL GLAZE 100K
RV012	1-224-256-XX	RES, ADJ, METAL GLAZE 220K
RV013	1-224-256-XX	RES, ADJ, METAL GLAZE 220K
RV014	1-228-270-00	RES, VAR, CARBON 10K
RV015	1-226-775-00	RES, ADJ, METAL GLAZE 100K
RV016	1-224-250-XX	RES, ADJ, METAL GLAZE 2.2K
RV017	1-224-255-XX	RES, ADJ, METAL GLAZE 100K
RV018	1-226-773-00	RES, ADJ, METAL GLAZE 22K

****

♠:A-6715-131-A SS-10A BOARD, COMPLETE
****

3-572-085-00	WASHER, FIBER
♠:3-655-214-00	CLIP, CABLE
♠:3-671-839-00	CASE (MAIN), SHIELD, SS-10
3-703-044-26	LABEL, CAUTION

CAPACITOR

C001	1-123-318-00	ELECT	33MF	20%	16V
C002	1-161-057-00	CERAMIC	0.033MF	10%	50V
C003	1-123-617-00	ELECT	10MF	20%	16V
C004	1-123-617-00	ELECT	10MF	20%	16V
C005	1-161-039-00	CERAMIC	0.001MF	10%	25V
C006	1-123-333-00	ELECT	100MF	20%	16V
C007	1-123-318-00	ELECT	33MF	20%	16V
C008	1-161-057-00	CERAMIC	0.033MF	10%	50V
C009	1-130-482-00	MYLAR	0.0082MF	5%	50V
C010	1-130-482-00	MYLAR	0.0082MF	5%	50V
C011	1-123-612-00	ELECT	2.2MF	20%	50V
C012	1-123-612-00	ELECT	2.2MF	20%	50V
C013	1-123-611-00	ELECT	1MF	20%	50V
C014	1-123-611-00	ELECT	1MF	20%	50V
C015	1-123-611-00	ELECT	1MF	20%	50V

NOTE:

The components identified by shading and mark ⚠ are critical for safety. Replace only with part number specified.

Les composants identifiés par une trame et une marque ⚠ sont critiques pour la sécurité. Ne les remplacer que par une pièce portant le numéro spécifié.

When indicating parts by reference number, please include the board name.

- =>: Due to standardization, interchangeable replacements may be substituted for parts specified in the diagrams.
- Items marked " ♠ " are not stocked since they are seldom required for routine service. Some delay should be anticipated when ordering these items.

- All variable and adjustable resistors have characteristic curve B, unless otherwise noted.

CAPACITORS
- MF : μF, PF : μμF

RESISTORS
- All resistors are in ohms
- F : nonflammable

COILS
- MMH : mH, UH : μH

SS-10A BOARD

Ref.No	Part No	Description			Remark
C016	1-123-611-00	ELECT	1MF	20%	50V
C017	1-123-617-00	ELECT	10MF	20%	16V
C018	1-123-318-00	ELECT	33MF	20%	16V
C019	1-161-057-00	CERAMIC	0.033MF	10%	50V
C020	1-123-318-00	ELECT	33MF	20%	16V
C021	1-161-057-00	CERAMIC	0.033MF	10%	50V
C022	1-123-611-00	ELECT	1MF	20%	50V
C023	1-123-611-00	ELECT	1MF	20%	50V
C024	1-161-009-00	CERAMIC	0.0047MF	10%	25V
C026	1-161-039-00	CERAMIC	0.001MF	10%	25V
C028	1-123-611-00	ELECT	1MF	20%	50V
C029	1-123-613-00	ELECT	3.3MF	20%	50V
C030	1-123-318-00	ELECT	33MF	20%	16V
C031	1-161-057-00	CERAMIC	0.033MF	10%	50V
C032	1-161-057-00	CERAMIC	0.033MF	10%	50V
C033	1-123-318-00	ELECT	33MF	20%	16V
C034	1-161-057-00	CERAMIC	0.033MF	10%	50V
C035	1-161-021-00	CERAMIC	0.047MF	10%	25V
C036	1-161-021-00	CERAMIC	0.047MF	10%	25V
C037	1-161-005-00	CERAMIC	0.0022MF	10%	25V
C038	1-123-616-00	ELECT	4.7MF	20%	25V
C039	1-161-057-00	CERAMIC	0.033MF	10%	50V
C040	1-161-057-00	CERAMIC	0.033MF	10%	50V
C041	1-123-611-00	ELECT	1MF	20%	50V
C042	1-161-772-11	CERAMIC	0.1MF	10%	25V
C043	1-161-025-00	CERAMIC	0.1MF	10%	25V
C044	1-161-005-00	CERAMIC	0.0022MF	10%	25V
C045	1-161-005-00	CERAMIC	0.0022MF	10%	25V
C301	1-161-021-00	CERAMIC	0.047MF	10%	25V
C302	1-130-491-51	MYLAR	0.047MF	5%	50V
C303	1-130-491-51	MYLAR	0.047MF	5%	50V
C304	1-123-613-00	ELECT	3.3MF	20%	50V
C305	1-123-613-00	ELECT	3.3MF	20%	50V
C306	1-123-613-00	ELECT	3.3MF	20%	50V
C307	1-130-483-51	MYLAR	0.01MF	5%	50V
C308	1-161-013-00	CERAMIC	0.01MF	10%	25V
C309	1-130-483-51	MYLAR	0.01MF	5%	50V
C310	1-123-296-00	ELECT	220MF	20%	6.3V
C311	1-161-021-00	CERAMIC	0.047MF	10%	25V
C312	1-161-017-00	CERAMIC	0.022MF	10%	25V
C317	1-123-611-00	ELECT	1MF	20%	50V
C318	1-123-618-00	ELECT	22MF	20%	6.3V
C319	1-123-333-00	ELECT	100MF	20%	16V
C321	1-123-318-00	ELECT	33MF	20%	16V
C322	1-123-318-00	ELECT	33MF	20%	16V
C323	1-161-021-00	CERAMIC	0.047MF	10%	25V
C325	1-130-483-51	MYLAR	0.01MF	5%	50V
C326	1-123-306-00	ELECT	47MF	20%	10V
C327	1-123-612-00	ELECT	2.2MF	20%	50V
C328	1-131-404-00	ELECT(SOLID)	0.22MF	10%	25V
C330	1-123-617-00	ELECT	10MF	20%	16V
C331	1-161-017-00	CERAMIC	0.022MF	10%	25V
C332	1-161-016-00	CERAMIC	0.018MF	10%	25V
C332	1-161-016-00	CERAMIC	0.018MF	10%	25V
C333	1-161-002-00	CERAMIC	0.0012MF	10%	25V
C334	1-161-013-00	CERAMIC	0.01MF	10%	25V
C335	1-130-493-51	MYLAR	0.068MF	5%	50V
C336	1-123-613-00	ELECT	3.3MF	20%	50V
C337	1-102-978-00	CERAMIC	220PF	5%	50V
C338	1-123-294-00	ELECT	47MF	20%	6.3V
C339	1-123-616-00	ELECT	4.7MF	20%	25V
C340	1-123-616-00	ELECT	4.7MF	20%	25V
C341	1-130-488-00	MYLAR	0.027MF	5%	50V
C342	1-123-622-00	ELECT	22MF	20%	16V
C343	1-123-294-00	ELECT	47MF	20%	6.3V
C344	1-123-295-00	ELECT	100MF	20%	6.3V
C345	1-161-017-00	CERAMIC	0.022MF	10%	25V
C346	1-161-013-00	CERAMIC	0.01MF	10%	25V
C347	1-161-016-00	CERAMIC	0.018MF	10%	25V
C348	1-131-368-00	TANTALUM	3.3MF	20%	16V
C349	1-131-347-00	TANTALUM	1MF	20%	35V
C350	1-123-294-00	ELECT	47MF	20%	6.3V
C351	1-123-612-00	ELECT	2.2MF	20%	50V
C353	1-161-013-00	CERAMIC	0.01MF	10%	25V
C354	1-102-824-00	CERAMIC	430PF	5%	50V
C355	1-161-013-00	CERAMIC	0.01MF	10%	25V
C356	1-123-611-00	ELECT	1MF	20%	50V
C361	1-123-616-00	ELECT	4.7MF	20%	25V
C362	1-123-616-00	ELECT	4.7MF	20%	25V
C370	1-161-021-00	CERAMIC	0.047MF	10%	25V
C371	1-161-021-00	CERAMIC	0.047MF	10%	25V
C372	1-130-486-51	MYLAR	0.018MF	5%	50V
C373	1-123-616-00	ELECT	4.7MF	20%	25V
C374	1-161-021-00	CERAMIC	0.047MF	10%	25V
C401	1-123-021-00	ELECT	0.47MF	30%	50V
C402	1-123-616-00	ELECT	4.7MF	20%	25V
C403	1-101-888-00	CERAMIC	68PF	5%	50V
C6D1	1-123-612-00	ELECT	2.2MF	20%	50V
C603	1-101-880-00	CERAMIC	47PF	5%	50V
C604	1-101-880-00	CERAMIC	47PF	5%	50V
C605	1-123-617-00	ELECT	10MF	20%	16V
C606	1-123-617-00	ELECT	10MF	20%	16V
C607	1-123-610-00	ELECT	0.47MF	20%	50V
C608	1-123-617-00	ELECT	10MF	20%	16V
C609	1-101-884-00	CERAMIC	56PF	5%	50V
C610	1-161-021-00	CERAMIC	0.047MF	10%	25V
C611	1-161-021-00	CERAMIC	0.047MF	10%	25V
C612	1-161-021-00	CERAMIC	0.047MF	10%	25V
C613	1-161-021-00	CERAMIC	0.047MF	10%	25V
C614	1-161-021-00	CERAMIC	0.047MF	10%	25V
C615	1-161-021-00	CERAMIC	0.047MF	10%	25V
C616	1-161-021-00	CERAMIC	0.047MF	10%	25V
C617	1-161-021-00	CERAMIC	0.047MF	10%	25V
C618	1-161-021-00	CERAMIC	0.047MF	10%	25V
C619	1-123-306-00	ELECT	47MF	20%	10V
C620	1-123-318-00	ELECT	33MF	20%	16V

NOTE:

The components identified by shading and mark ⚠ are critical for safety. Replace only with part number specified.

Les composants identifiés par une trame et une marque ⚠ sont critiques pour la sécurité. Ne les remplacer que par une pièce portant le numéro spécifié.

When indicating parts by reference number, please include the board name.

- =>: Due to standardization, interchangeable replacements may be substituted for parts specified in the diagrams.
- Items marked " ♠ " are not stocked since they are seldom required for routine service. Some delay should be anticipated when ordering these items.

- All variable and adjustable resistors have characteristic curve B, unless otherwise noted.

CAPACITORS
- MF : μF, PF : μμF

RESISTORS
- All resistors are in ohms
- F : nonflammable

COILS
- MMH : mH, UH : μH

SS-10A BOARD

Ref.No	Part No	Description			Remark
C621	1-123-318-00	ELECT	33MF	20%	16V
C622	1-161-023-00	CERAMIC	0.068MF	10%	25V
C630	1-161-021-00	CERAMIC	0.047MF	10%	25V
C640	1-161-017-00	CERAMIC	0.022MF	10%	25V
		CONNECTOR			
CN001♦	1-560-466-00	PIN, CONNECTOR 3P			
CN002♦	1-560-466-00	PIN, CONNECTOR 3P			
CN003♦	1-560-469-00	PIN, CONNECTOR 6P			
CN301♦	1-560-467-00	PIN, CONNECTOR 4P			
CN302♦	1-560-466-00	PIN, CONNECTOR 3P			
CN303♦	1-560-467-00	PIN, CONNECTOR 4P			
CN304♦	1-560-456-00	PIN, CONNECTOR 2P			
CN305♦	1-560-467-00	PIN, CONNECTOR 4P			
CN306♦	1-560-466-00	PIN, CONNECTOR 3P			
CN307♦	1-560-467-00	PIN, CONNECTOR 4P			
CN308♦	1-560-472-00	PIN, CONNECTOR 12P			
CN309♦	1-560-456-00	PIN, CONNECTOR 2P			
CN310♦	1-560-460-00	PIN, CONNECTOR 4P			
CN601♦	1-560-468-00	PIN, CONNECTOR 5P			
CN602♦	1-560-470-00	PIN, CONNECTOR 8P			
CN603♦	1-560-470-00	PIN, CONNECTOR 8P			
CN604♦	1-560-470-00	PIN, CONNECTOR 8P			
CN608♦	1-560-467-00	PIN, CONNECTOR 4P			
CN609♦	1-560-468-00	PIN, CONNECTOR 5P			
CN610♦	1-560-469-00	PIN, CONNECTOR 6P			
CN611♦	1-560-470-00	PIN, CONNECTOR 8P			
CN612♦	1-560-467-00	PIN, CONNECTOR 4P			
CN613♦	1-560-470-00	PIN, CONNECTOR 8P			
CN614♦	1-560-471-00	PIN, CONNECTOR 10P			
CN615♦	1-560-467-00	PIN, CONNECTOR 4P			
CN616♦	1-560-467-00	PIN, CONNECTOR 4P			
CN617♦	1-560-467-00	PIN, CONNECTOR 4P			
CN618♦	1-560-467-00	PIN, CONNECTOR 4P			
CN619♦	1-560-467-00	PIN, CONNECTOR 4P			
CN620♦	1-560-468-00	PIN, CONNECTOR 5P			
CN621♦	1-560-471-00	PIN, CONNECTOR 10P			
CN622♦	1-560-471-00	PIN, CONNECTOR 10P			
CN623♦	1-560-469-00	PIN, CONNECTOR 6P			
CN624♦	1-560-470-00	PIN, CONNECTOR 8P			
CN625♦	1-560-472-00	PIN, CONNECTOR 12P			
CN626♦	1-560-471-00	PIN, CONNECTOR 10P			
CN627♦	1-560-470-00	PIN, CONNECTOR 8P			
		COMPOSITION CIRCUIT BLOCK			
CP001	1-232-055-00	COMPOSITION CIRCUIT BLOCK			
CP004	1-232-057-00	COMPOSITION CIRCUIT BLOCK			
CP005	1-232-058-00	COMPOSITION CIRCUIT BLOCK			
CP006	1-232-059-00	COMPOSITION CIRCUIT BLOCK			
CP007	1-232-060-00	COMPOSITION CIRCUIT BLOCK			
CP008	1-232-060-00	COMPOSITION CIRCUIT BLOCK			
CP009	1-232-061-00	COMPOSITION CIRCUIT BLOCK			
CP010	1-232-061-00	COMPOSITION CIRCUIT BLOCK			

Ref.No	Part No	Description	Remark
CP011	1-232-062-00	COMPOSITION CIRCUIT BLOCK	
CP012	1-232-069-00	COMPOSITION CIRCUIT BLOCK	
CP013	1-232-063-00	COMPOSITION CIRCUIT BLOCK	
CP014	1-232-059-00	COMPOSITION CIRCUIT BLOCK	
CP015	1-232-064-00	COMPOSITION CIRCUIT BLOCK	
CP016	1-232-169-00	COMPOSITION CIRCUIT BLOCK	
CP017	1-232-169-00	COMPOSITION CIRCUIT BLOCK	
CP018	1-232-066-00	COMPOSITION CIRCUIT BLOCK	
CP019	1-232-067-00	COMPOSITION CIRCUIT BLOCK	
CP020	1-232-059-00	COMPOSITION CIRCUIT BLOCK	
CP021	1-232-068-00	COMPOSITION CIRCUIT BLOCK	
CP022	1-232-062-00	COMPOSITION CIRCUIT BLOCK	
CP023	1-232-061-00	COMPOSITION CIRCUIT BLOCK	
CP024	1-232-061-00	COMPOSITION CIRCUIT BLOCK	
CP025	1-232-069-00	COMPOSITION CIRCUIT BLOCK	
CP026	1-232-139-00	COMPOSITION CIRCUIT BLOCK	
CP027	1-232-142-00	COMPOSITION CIRCUIT BLOCK	
CP028	1-232-143-00	COMPOSITION CIRCUIT BLOCK	
CP030	1-232-144-00	COMPOSITION CIRCUIT BLOCK	
CP031	1-232-218-00	COMPOSITION CIRCUIT BLOCK	
CP032	1-232-146-00	COMPOSITION CIRCUIT BLOCK	
CP033	1-232-147-00	COMPOSITION CIRCUIT BLOCK	
CP301	1-232-136-00	COMPOSITION CIRCUIT BLOCK	
CP303	1-232-137-00	COMPOSITION CIRCUIT BLOCK	
CP304	1-232-138-00	COMPOSITION CIRCUIT BLOCK	
CP312	1-232-140-00	COMPOSITION CIRCUIT BLOCK	
CP313	1-232-141-00	COMPOSITION CIRCUIT BLOCK	
CP315	1-232-151-00	COMPOSITION CIRCUIT BLOCK	
CP316	1-232-151-00	COMPOSITION CIRCUIT BLOCK	
CP317	1-232-079-00	COMPOSITION CIRCUIT BLOCK	
CP318	1-232-071-00	COMPOSITION CIRCUIT BLOCK	
CP319	1-232-148-00	COMPOSITION CIRCUIT BLOCK	
CP322	1-232-152-00	COMPOSITION CIRCUIT BLOCK	
CP323	1-232-148-00	COMPOSITION CIRCUIT BLOCK	
CP324	1-232-150-00	COMPOSITION CIRCUIT BLOCK	
CP326	1-232-152-00	COMPOSITION CIRCUIT BLOCK	
CP328	1-232-126-00	COMPOSITION CIRCUIT BLOCK	
CP329	1-232-150-00	COMPOSITION CIRCUIT BLOCK	
CP335	1-232-149-00	COMPOSITION CIRCUIT BLOCK	
CP601	1-232-158-00	COMPOSITION CIRCUIT BLOCK	
CP602	1-232-158-00	COMPOSITION CIRCUIT BLOCK	
CP605	1-232-157-00	COMPOSITION CIRCUIT BLOCK	
CP606	1-232-159-00	COMPOSITION CIRCUIT BLOCK	
CP607	1-232-159-00	COMPOSITION CIRCUIT BLOCK	
CP609	1-232-154-00	COMPOSITION CIRCUIT BLOCK	
CP610	1-232-155-00	COMPOSITION CIRCUIT BLOCK	
CP612	1-232-156-00	COMPOSITION CIRCUIT BLOCK	
CP613	1-232-163-00	COMPOSITION CIRCUIT BLOCK	
CP614	1-232-163-00	COMPOSITION CIRCUIT BLOCK	
CP615	1-232-153-00	COMPOSITION CIRCUIT BLOCK	
		DIODE	
D001	8-719-911-06	DIODE 1SS106	

NOTE:

The components identified by shading and mark ⚠ are critical for safety.
Replace only with part number specified.

Les composants identifiés par une trame et une marque ⚠ sont critiques pour la sécurité. Ne les remplacer que par une pièce portant le numéro spécifié.

When indicating parts by reference number, please include the board name.

- =>: Due to standardization, interchangeable replacements may be substituted for parts specified in the diagrams.
- Items marked " ♦ " are not stocked since they are seldom required for routine service. Some delay should be anticipated when ordering these items.

- All variable and adjustable resistors have characteristic curve B, unless otherwise noted.

CAPACITORS
- MF : μF, PF : μμF

RESISTORS
- All resistors are in ohms
- F : nonflammable

COILS
- MMH : mH, UH : μH

SS-10A BOARD

Ref.No	Part No	Description	Remark
D002	8-719-911-06	DIODE 1SS106	
D003	8-719-911-19	DIODE 1SS119	
D008	8-719-911-19	DIODE 1SS119	
D009	8-719-982-04	DIODE ERB81-004	
D010	8-719-911-19	DIODE 1SS119	
D012	8-719-911-19	DIODE 1SS119	
D013	8-719-982-04	DIODE ERB81-004	
D014	8-719-911-19	DIODE 1SS119	
D015	8-719-911-19	DIODE 1SS119	
D301	8-719-911-06	DIODE 1SS106	
D302	8-719-911-19	DIODE 1SS119	
D303	8-719-982-04	DIODE ERB81-004	
D304	8-719-113-07	DIODE RD13E-B	
D305	8-719-911-06	DIODE 1SS106	
D306	8-719-911-19	DIODE 1SS119	
D307	8-719-911-19	DIODE 1SS119	
D308	8-719-911-06	DIODE 1SS106	
D309	8-719-911-19	DIODE 1SS119	
D310	8-719-911-19	DIODE 1SS119	
D311	8-719-911-19	DIODE 1SS119	
D312	8-719-911-19	DIODE 1SS119	
D313	8-719-911-19	DIODE 1SS119	
D314	8-719-911-19	DIODE 1SS119	
D315	8-719-911-19	DIODE 1SS119	
D316	8-719-911-19	DIODE 1SS119	
D317	8-719-911-19	DIODE 1SS119	
D318	8-719-911-19	DIODE 1SS119	
D401	8-719-911-19	DIODE 1SS119	
D603 =>	8-719-901-33	DIODE 1SS133	
D604	8-719-911-06	DIODE 1SS106	
D612	8-719-911-06	DIODE 1SS106	

FUSE

Ref.No	Part No	Description	Remark
F601⚠	1-532-625-00	FUSE, GLASS TUBE 1.25A 125V	
F602⚠	1-532-624-00	FUSE, GLASS TUBE 0.5A 125V	
F603⚠	1-532-595-00	FUSE, GLASS TUBE 3.15A 125V	
F604	1-532-605-00	FUSE, ELECTRIC CURRENT	

IC

Ref.No	Part No	Description	Remark
IC001	8-759-103-93	IC UPC393C	
IC002	8-759-132-40	IC UPC324C	
IC003	8-759-132-40	IC UPC324C	
IC004	8-759-103-93	IC UPC393C	
IC005	8-743-980-00	IC BX-3980	
IC006	8-743-976-00	IC BX-3976	
IC301	8-751-940-02	IC CX-194A-2	
IC302=>	8-743-984-00	IC BX-3984	
IC303	8-743-983-00	IC BX-3983	
IC304	8-759-132-40	IC UPC324C	
IC305	8-759-904-94	IC TL494CN	
IC306	8-743-978-00	IC BX-3978	
IC307	8-759-240-30	IC TC4030BP	
IC308	8-759-240-53	IC TC4053BP	
IC309	8-741-103-90	IC BX-1039	
IC310	8-743-981-00	IC BX-3981	
IC311	8-741-103-80	IC BX-1038	
IC312	8-759-250-26	IC TC5026BP	
IC313	8-759-240-51	IC TC4051BP	
IC314	8-741-013-10	IC BX-1013-1	
IC601	8-759-985-27	IC MB8845-527	
IC602	8-759-985-28	IC MB8845-528	
IC603	8-759-900-45	IC MB8845-549	
IC604	8-759-133-90	IC UPC339C	
IC605	8-759-220-04	IC TC40H004P	
IC606	8-759-240-69	IC TC4069UBP	
IC607=>	8-759-240-13	IC TC4013BP	
IC608	8-759-987-47	IC MB8747	
IC609	8-759-987-47	IC MB8747	
IC610	8-743-988-00	IC BX-3988	
IC611	8-759-900-04	IC SN74LS04N	
IC612	8-741-101-60	IC BX-1016	

COIL

Ref.No	Part No	Description	Remark
L001	1-408-519-00	COIL, CHOKE 42UH	
L002	1-408-519-00	COIL, CHOKE 42UH	
L003	1-408-519-00	COIL, CHOKE 42UH	
L301	1-408-518-00	COIL, CHOKE 1MMH	
L302	1-459-232-00	COIL, CORE 90UH	
L601	1-408-409-00	MICRO INDUCTOR 10UH	
L602	1-408-409-00	MICRO INDUCTOR 10UH	

TRANSISTOR

Ref.No	Part No	Description	Remark
Q001	8-729-117-54	TRANSISTOR 2SA1175	
Q002	8-729-178-54	TRANSISTOR 2SC2785	
Q003	8-729-178-54	TRANSISTOR 2SC2785	
Q004	8-729-178-54	TRANSISTOR 2SC2785	
Q006	8-729-178-54	TRANSISTOR 2SC2785	
Q007	8-729-178-54	TRANSISTOR 2SC2785	
Q008	8-729-117-54	TRANSISTOR 2SA1175	
Q009	8-729-178-54	TRANSISTOR 2SC2785	
Q010	8-729-178-54	TRANSISTOR 2SC2785	
Q011	8-729-178-54	TRANSISTOR 2SC2785	
Q012	8-729-178-54	TRANSISTOR 2SC2785	
Q013	8-729-178-54	TRANSISTOR 2SC2785	
Q014	8-729-178-54	TRANSISTOR 2SC2785	
Q015	8-729-178-54	TRANSISTOR 2SC2785	
Q016	8-729-117-54	TRANSISTOR 2SA1175	
Q017	8-729-113-33	TRANSISTOR 2SB733	
Q018	8-729-113-33	TRANSISTOR 2SB733	
Q019	8-729-178-54	TRANSISTOR 2SC2785	
Q020	8-729-178-54	TRANSISTOR 2SC2785	
Q021	8-729-178-54	TRANSISTOR 2SC2785	
Q022	8-729-178-54	TRANSISTOR 2SC2785	
Q023	8-729-178-54	TRANSISTOR 2SC2785	
Q024	8-729-117-54	TRANSISTOR 2SA1175	
Q025	8-729-113-33	TRANSISTOR 2SB733	

NOTE:

The components identified by shading and mark ⚠ are critical for safety.
Replace only with part number specified.

Les composants identifiés par une trame et une marque ⚠ sont critiques pour la sécurité. Ne les remplacer que par une pièce portant le numéro spécifié.

When indicating parts by reference number, please include the board name.

- =>: Due to standardization, interchangeable replacements may be substituted for parts specified in the diagrams.
- Items marked " ♠ " are not stocked since they are seldom required for routine service. Some delay should be anticipated when ordering these items.

- All variable and adjustable resistors have characteristic curve B, unless otherwise noted.

CAPACITORS
- MF : μF, PF : $\mu\mu$F

RESISTORS
- All resistors are in ohms
- F : nonflammable

COILS
- MMH : mH, UH : μH

SS-10A BOARD

Ref.No	Part No	Description		Remark
Q026	8-729-113-33	TRANSISTOR	2SB733	
Q027	8-729-178-54	TRANSISTOR	2SC2785	
Q028	8-729-178-54	TRANSISTOR	2SC2785	
Q029	8-729-178-54	TRANSISTOR	2SC2785	
Q030	8-729-117-54	TRANSISTOR	2SA1175	
Q301	8-729-178-54	TRANSISTOR	2SC2785	
Q302	8-729-177-32	TRANSISTOR	2SD773	
Q303	8-729-117-54	TRANSISTOR	2SA1175	
Q304	=>8-729-113-33	TRANSISTOR	2SB733-U2	
Q305	8-729-178-54	TRANSISTOR	2SC2785	
Q307	8-729-178-54	TRANSISTOR	2SC2785	
Q308	8-729-178-54	TRANSISTOR	2SC2785	
Q309	8-729-117-54	TRANSISTOR	2SA1175	
Q310	8-729-178-54	TRANSISTOR	2SC2785	
Q311	8-729-178-54	TRANSISTOR	2SC2785	
Q314	8-729-178-54	TRANSISTOR	2SC2785	
Q315	8-729-178-54	TRANSISTOR	2SC2785	
Q317	8-729-178-54	TRANSISTOR	2SC2785	
Q318	8-729-117-54	TRANSISTOR	2SA1175	
Q320	8-729-178-54	TRANSISTOR	2SC2785	
Q321	8-729-117-54	TRANSISTOR	2SA1175	
Q322	8-729-117-54	TRANSISTOR	2SA1175	
Q324	8-729-178-54	TRANSISTOR	2SC2785	
Q325	8-729-178-54	TRANSISTOR	2SC2785	
Q326	8-729-117-54	TRANSISTOR	2SA1175	
Q327	8-729-178-54	TRANSISTOR	2SC2785	
Q328	8-729-178-54	TRANSISTOR	2SC2785	
Q401	8-729-178-54	TRANSISTOR	2SC2785	
Q601	8-729-178-54	TRANSISTOR	2SC2785	
Q602	8-729-178-54	TRANSISTOR	2SC2785	
Q603	8-729-178-54	TRANSISTOR	2SC2785	
Q604	8-729-113-33	TRANSISTOR	2SB733	
Q605	8-729-178-54	TRANSISTOR	2SC2785	
Q606	8-729-178-54	TRANSISTOR	2SC2785	
Q607	8-729-178-54	TRANSISTOR	2SC2785	
Q613	8-729-178-54	TRANSISTOR	2SC2785	
Q614	8-729-178-54	TRANSISTOR	2SC2785	
Q615	8-729-178-54	TRANSISTOR	2SC2785	
Q616	8-729-178-54	TRANSISTOR	2SC2785	
Q617	8-729-178-54	TRANSISTOR	2SC2785	
Q618	8-729-178-54	TRANSISTOR	2SC2785	
Q620	8-729-178-54	TRANSISTOR	2SC2785	
Q621	8-729-178-54	TRANSISTOR	2SC2785	
Q624	8-729-117-54	TRANSISTOR	2SA1175	
Q625	8-729-117-54	TRANSISTOR	2SA1175	
Q626	8-729-117-54	TRANSISTOR	2SA1175	
Q640	8-729-178-54	TRANSISTOR	2SC2785	

RESISTOR

Ref.No	Part No	Description				Remark
R011	1-246-803-00	CARBON	47K		1/8W	
R014	1-247-055-00	CARBON	300K		1/8W	
R017	1-246-803-00	CARBON	47K		1/8W	
R018	1-246-859-00	CARBON	20K		1/8W	
R020	1-246-799-00	CARBON	22K		1/8W	
R021	1-246-803-00	CARBON	47K		1/8W	
R022	1-246-794-00	CARBON	8.2K		1/8W	
R023	1-246-785-00	CARBON	1.5K		1/8W	
R030	1-246-803-00	CARBON	47K		1/8W	
R031	1-246-791-00	CARBON	4.7K		1/8W	
R032	1-246-803-00	CARBON	47K		1/8W	
R035	1-246-803-00	CARBON	47K		1/8W	
R037	1-246-783-00	CARBON	1K		1/8W	
R038	1-246-799-00	CARBON	22K		1/8W	
R041	1-246-799-00	CARBON	22K		1/8W	
R042	1-246-799-00	CARBON	22K		1/8W	
R043	1-246-795-00	CARBON	10K		1/8W	
R044	1-246-803-00	CARBON	47K		1/8W	
R045	1-246-449-00	CARBON	100	5%	1/4W	
R046	1-246-457-00	CARBON	220	5%	1/4W	
R055	1-244-861-00	CARBON	330	5%	1/2W	
R056	1-246-783-00	CARBON	1K		1/8W	
R057 ⚠	1-217-612-00	WIREWOUND	0.1		2W	F
R058	1-246-801-00	CARBON	33K		1/8W	
R060	1-246-860-00	CARBON	24K		1/8W	
R064	1-247-049-00	CARBON	470K		1/8W	
R068	1-246-795-00	CARBON	10K		1/8W	
R071	1-247-057-00	CARBON	430K		1/8W	
R073	1-246-795-00	CARBON	10K		1/8W	
R080	1-246-783-00	CARBON	1K		1/8W	
R081	1-246-807-00	CARBON	100K		1/8W	
R082	1-247-049-00	CARBON	470K		1/8W	
R083	1-246-791-00	CARBON	4.7K		1/8W	
R084	1-246-791-00	CARBON	4.7K		1/8W	
R085	1-246-799-00	CARBON	22K		1/8W	
R089	1-246-795-00	CARBON	10K		1/8W	
R090	1-247-049-00	CARBON	470K		1/8W	
R091	1-246-807-00	CARBON	100K		1/8W	
R093	1-246-803-00	CARBON	47K		1/8W	
R094	1-246-795-00	CARBON	10K		1/8W	
R095	1-246-449-00	CARBON	100	5%	1/4W	
R096	1-246-457-00	CARBON	220	5%	1/4W	
R103	1-244-861-00	CARBON	330	5%	1/2W	
R106	1-246-783-00	CARBON	1K		1/8W	
R108	1-246-803-00	CARBON	47K		1/8W	
R110	1-246-811-00	CARBON	220K		1/8W	
R111	1-246-803-00	CARBON	47K		1/8W	
R113	1-246-803-00	CARBON	47K		1/8W	
R114	1-246-803-00	CARBON	47K		1/8W	
R115	1-246-801-00	CARBON	33K		1/8W	
R116	1-246-847-00	CARBON	2K		1/8W	
R117	1-246-799-00	CARBON	22K		1/8W	
R118	1-246-799-00	CARBON	22K		1/8W	
R301	1-246-799-00	CARBON	22K		1/8W	
R302	1-246-793-00	CARBON	6.8K		1/8W	
R303	1-246-797-00	CARBON	15K		1/8W	
R304	1-246-795-00	CARBON	10K		1/8W	

NOTE:

The components identified by shading and mark ⚠ are critical for safety.
Replace only with part number specified.

Les composants identifiés par une trame et une marque ⚠ sont critiques pour la sécurité. Ne les remplacer que par une pièce portant le numéro spécifié.

When indicating parts by reference number, please include the board name.

- =>: Due to standardization, interchangeable replacements may be substituted for parts specified in the diagrams.
- Items marked " ♠ " are not stocked since they are seldom required for routine service. Some delay should be anticipated when ordering these items.

- All variable and adjustable resistors have characteristic curve B, unless otherwise noted.

CAPACITORS
- MF : μF, PF : μμF

RESISTORS
- All resistors are in ohms
- F : nonflammable

COILS
- MMH : mH, UH : μH

SS-10A BOARD

Ref.No	Part No	Description				Remark
R310	1-246-795-00	CARBON	10K		1/8W	
R311	1-246-795-00	CARBON	10K		1/8W	
R315	1-246-791-00	CARBON	4.7K		1/8W	
R316	1-246-805-00	CARBON	68K		1/8W	
R317	1-246-803-00	CARBON	47K		1/8W	
R318	1-246-852-00	CARBON	5.1K		1/8W	
R321	1-246-783-00	CARBON	1K		1/8W	
R322 ⚠	1-212-356-00	METAL	0.47	5%	1W	F
R323	1-246-799-00	CARBON	22K		1/8W	
R327	1-246-797-00	CARBON	15K		1/8W	
R330	1-246-788-00	CARBON	2.7K		1/8W	
R331	1-246-809-00	CARBON	150K		1/8W	
R334	1-246-801-00	CARBON	33K		1/8W	
R337	1-246-801-00	CARBON	33K		1/8W	
R338	1-246-809-00	CARBON	150K		1/8W	
R339	1-246-810-00	CARBON	180K		1/8W	
R340	1-246-788-00	CARBON	2.7K		1/8W	
R342	1-246-801-00	CARBON	33K		1/8W	
R344	1-246-801-00	CARBON	33K		1/8W	
R345	1-246-801-00	CARBON	33K		1/8W	
R346	1-246-807-00	CARBON	100K		1/8W	
R347	1-246-806-00	CARBON	82K		1/8W	
R348	1-246-801-00	CARBON	33K		1/8W	
R353	1-246-769-00	CARBON	68		1/8W	
R354	1-246-795-00	CARBON	10K		1/8W	
R355	1-246-795-00	CARBON	10K		1/8W	
R358	1-246-795-00	CARBON	10K		1/8W	
R363	1-246-809-00	CARBON	150K		1/8W	
R364	1-246-801-00	CARBON	33K		1/8W	
R365	1-246-866-00	CARBON	75K		1/8W	
R366	1-246-859-00	CARBON	20K		1/8W	
R367	1-246-799-00	CARBON	22K		1/8W	
R368	1-246-804-00	CARBON	56K		1/8W	
R369	1-246-800-00	CARBON	27K		1/8W	
R370	1-246-802-00	CARBON	39K		1/8W	
R371	1-246-795-00	CARBON	10K		1/8W	
R373	1-246-783-00	CARBON	1K		1/8W	
R374	1-246-804-00	CARBON	56K		1/8W	
R375	1-246-795-00	CARBON	10K		1/8W	
R376	1-246-795-00	CARBON	10K		1/8W	
R377	1-246-795-00	CARBON	10K		1/8W	
R378	1-246-799-00	CARBON	22K		1/8W	
R381	1-246-783-00	CARBON	1K		1/8W	
R382	1-246-795-00	CARBON	10K		1/8W	
R383	1-246-803-00	CARBON	47K		1/8W	
R387	1-246-795-00	CARBON	10K		1/8W	
R390	1-246-851-00	CARBON	4.3K		1/8W	
R391	1-246-803-00	CARBON	47K		1/8W	
R392	1-246-799-00	CARBON	22K		1/8W	
R393	1-246-799-00	CARBON	22K		1/8W	
R394	1-246-795-00	CARBON	10K		1/8W	
R396	1-246-810-00	CARBON	180K		1/8W	
R397	1-246-801-00	CARBON	33K		1/8W	
R399	1-246-837-00	CARBON	300		1/8W	
R400	1-246-798-00	CARBON	18K		1/8W	
R401	1-246-779-00	CARBON	470		1/8W	
R404	1-246-801-00	CARBON	33K		1/8W	
R407	1-246-803-00	CARBON	47K		1/8W	
R411	1-246-803-00	CARBON	47K		1/8W	
R412	1-246-795-00	CARBON	10K		1/8W	
R414	1-246-783-00	CARBON	1K		1/8W	
R415	1-246-803-00	CARBON	47K		1/8W	
R416	1-246-799-00	CARBON	22K		1/8W	
R451	1-247-047-00	CARBON	330K		1/8W	
R452	1-246-797-00	CARBON	15K		1/8W	
R453	1-247-054-00	CARBON	240K		1/8W	
R460	1-246-795-00	CARBON	10K		1/8W	
R468	1-246-791-00	CARBON	4.7K		1/8W	
R473	1-246-803-00	CARBON	47K		1/8W	
R474	1-246-787-00	CARBON	2.2K		1/8W	
R479	1-246-807-00	CARBON	100K		1/8W	
R480	1-246-805-00	CARBON	68K		1/8W	
R481	1-246-805-00	CARBON	68K		1/8W	
R482	1-246-805-00	CARBON	68K		1/8W	
R483	1-246-801-00	CARBON	33K		1/8W	
R484	1-246-791-00	CARBON	4.7K		1/8W	
R487	1-246-795-00	CARBON	10K		1/8W	
R488	1-246-800-00	CARBON	27K		1/8W	
R489	1-246-845-00	CARBON	1.3K		1/8W	
R490	1-246-845-00	CARBON	1.3K		1/8W	
R491	1-246-845-00	CARBON	1.3K		1/8W	
R492	1-246-797-00	CARBON	15K		1/8W	
R495	1-246-444-00	CARBON	62	5%	1/4W	
R496	1-246-779-00	CARBON	470		1/8W	
R498	1-246-803-00	CARBON	47K		1/8W	
R499	1-246-791-00	CARBON	4.7K		1/8W	
R501	1-246-850-00	CARBON	3.6K		1/8W	
R502	1-246-852-00	CARBON	5.1K		1/8W	
R503	1-246-759-00	CARBON	10		1/8W	
R601	1-246-799-00	CARBON	22K		1/8W	
R602	1-246-807-00	CARBON	100K		1/8W	
R603	1-246-799-00	CARBON	22K		1/8W	
R605	1-246-807-00	CARBON	100K		1/8W	
R606	1-246-803-00	CARBON	47K		1/8W	
R607	1-246-791-00	CARBON	4.7K		1/8W	
R608	1-246-807-00	CARBON	100K		1/8W	
R609	1-246-469-00	CARBON	680	5%	1/4W	
R610	1-246-803-00	CARBON	47K		1/8W	
R611	1-246-807-00	CARBON	100K		1/8W	
R612	1-246-807-00	CARBON	100K		1/8W	
R613	1-246-803-00	CARBON	47K		1/8W	
R615	1-246-783-00	CARBON	1K		1/8W	
R616	1-246-859-00	CARBON	20K		1/8W	
R617	1-246-795-00	CARBON	10K		1/8W	
R618	1-246-791-00	CARBON	4.7K		1/8W	
R627	1-246-791-00	CARBON	4.7K		1/8W	

NOTE:

The components identified by shading and mark ⚠ are critical for safety.
Replace only with part number specified.

Les composants identifiés par une trame et une marque ⚠ sont critiques pour la sécurité.
Ne les remplacer que par une pièce portant le numéro spécifié.

When indicating parts by reference number, please include the board name.

- =>: Due to standardization, interchangeable replacements may be substituted for parts specified in the diagrams.
- Items marked " ♠ " are not stocked since they are seldom required for routine service. Some delay should be anticipated when ordering these items.

- All variable and adjustable resistors have characteristic curve B, unless otherwise noted.

CAPACITORS
- MF : μF, PF : μμF

RESISTORS
- All resistors are in ohms
- F : nonflammable

COILS
- MMH : mH, UH : μH

SS-10A BOARD

Ref.No	Part No	Description			Remark
R628	1-246-791-00	CARBON	4.7K	1/8W	
R629	1-246-791-00	CARBON	4.7K	1/8W	
R630	1-246-791-00	CARBON	4.7K	1/8W	
R631	1-246-791-00	CARBON	4.7K	1/8W	
R632	1-246-791-00	CARBON	4.7K	1/8W	
R633	1-246-801-00	CARBON	33K	1/8W	
R633	1-246-803-00	CARBON	47K	1/8W	
R634	1-246-803-00	CARBON	47K	1/8W	
R635	1-246-803-00	CARBON	47K	1/8W	
R640	1-247-049-00	CARBON	470K	1/8W	
R645	1-246-795-00	CARBON	10K	1/8W	
R648	1-246-791-00	CARBON	4.7K	1/8W	
R649	1-246-791-00	CARBON	4.7K	1/8W	
R650	1-246-791-00	CARBON	4.7K	1/8W	
R660	1-246-803-00	CARBON	47K	1/8W	
R690	1-246-783-00	CARBON	1K	1/8W	
R691	1-246-803-00	CARBON	47K	1/8W	
R693	1-246-783-00	CARBON	1K	1/8W	
R694	1-246-795-00	CARBON	10K	1/8W	
R695	1-246-795-00	CARBON	10K	1/8W	
R699	1-246-807-00	CARBON	100K	1/8W	
R703	1-246-751-00	CARBON	2.2	1/8W	

VARIABLE RESISTOR

Ref.No	Part No	Description
RV001	1-226-774-00	RES, ADJ, METAL GLAZE 47K
RV002	1-226-773-00	RES, ADJ, METAL GLAZE 22K
RV301	1-226-753-00	RES, ADJ, SOLID 47K
RV302	1-224-254-XX	RES, ADJ, METAL GLAZE 47K
RV303	1-226-771-00	RES, ADJ, METAL GLAZE 1K
RV304	1-226-753-00	RES, ADJ, SOLID 47K
RV305	1-226-753-00	RES, ADJ, SOLID 47K
RV306	1-226-774-00	RES, ADJ, METAL GLAZE 47K
RV307	1-226-703-00	RES, ADJ, METAL GLAZE 10K
RV308	1-226-703-00	RES, ADJ, METAL GLAZE 10K
RV309	1-226-703-00	RES, ADJ, METAL GLAZE 10K
RV310	1-226-703-00	RES, ADJ, METAL GLAZE 10K
RV314	1-226-753-00	RES, ADJ, SOLID 47K
RV315	1-226-701-00	RES, ADJ, METAL GLAZE 220
RV316	1-226-701-00	RES, ADJ, METAL GLAZE 220
RV317	1-226-753-00	RES, ADJ, SOLID 47K

THERMISTOR

Ref.No	Part No	Description
TH001	1-800-200-00	THERMISTOR S-3K
TH301	1-800-200-00	THERMISTOR S-3K

CRYSTAL

Ref.No	Part No	Description
X601	1-527-726-00	VIBRATOR, CRYSTAL

FU-3 BOARD

Ref.No	Part No	Description				Remar
	♠:A-6717-225-A	FU-3 BOARD, COMPLETE ********************				
	♠:3-670-094-02	HOLDER, LED, 6 GANG				
	♠:3-670-095-00	HOLDER, LED				
	♠:3-674-312-00	COVER, 3 GANG LED				
	♠:3-674-313-00	COVER, LED				
	♠:3-674-314-00	PROTECTOR (A)				
	♠:3-674-315-00	PROTECTOR (B)				
	♠:3-674-316-00	RETAINER, HARNESS				

CAPACITOR

Ref.No	Part No	Description				Remar
C001	1-161-013-00	CERAMIC	0.01MF	10%	25V	
C002	1-123-617-00	ELECT	10MF	20%	16V	
C003	1-161-321-00	CERAMIC	680PF	10%	50V	

DIODE

Ref.No	Part No	Description
D001	8-719-812-30	DIODE TL0123
D002	8-719-914-02	DIODE BR3402S
D003	8-719-914-33	DIODE PG3432SY
D004	8-719-812-32	DIODE TLY123
D005	8-719-812-32	DIODE TLY123
D006	8-719-812-32	DIODE TLY123
D008	8-719-914-02	DIODE BR3402S
D009	8-719-932-22	DIODE GL-9NG922B
D010	8-719-932-22	DIODE GL-9NG922B
D011	8-719-932-22	DIODE GL-9NG922B
D012	8-719-932-22	DIODE GL-9NG922B
D013	8-719-932-22	DIODE GL-9NG922B
D014	8-719-932-22	DIODE GL-9NG922B
D015	8-719-914-33	DIODE PG3432SY
D016	8-719-914-33	DIODE PG3432SY
D017	8-719-914-33	DIODE PG3432SY
D018	8-719-914-33	DIODE PG3432SY
D019	8-719-914-33	DIODE PG3432SY
D020	8-719-914-33	DIODE PG3432SY
D021	8-719-914-33	DIODE PG3432SY
D022	8-719-914-33	DIODE PG3432SY
D023	8-719-914-33	DIODE PG3432SY
D024	8-719-812-32	DIODE TLY123
D026	8-719-812-32	DIODE TLY123
D027	8-719-812-32	DIODE TLY123
D028	8-719-812-32	DIODE TLY123
D029	8-719-911-06	DIODE 1SS106
D030	8-719-911-06	DIODE 1SS106
D031	8-719-911-06	DIODE 1SS106

IC

Ref.No	Part No	Description
IC001	8-759-987-58	IC MB8758

TRANSISTOR

Ref.No	Part No	Description
Q001	8-729-178-54	TRANSISTOR 2SC2785
Q002	8-729-178-54	TRANSISTOR 2SC2785

NOTE:

The components identified by shading and mark ⚠ are critical for safety.
Replace only with part number specified.

Les composants identifiés par une trame et une marque ⚠ sont critiques pour la sécurité. Ne les remplacer que par une pièce portant le numéro spécifié.

When indicating parts by reference number, please include the board name.

- =>: Due to standardization, interchangeable replacements may be substituted for parts specified in the diagrams.
- Items marked " ♠ " are not stocked since they are seldom required for routine service. Some delay should be anticipated when ordering these items.

- All variable and adjustable resistors have characteristic curve B, unless otherwise noted.

CAPACITORS
- MF : μF, PF : μμF

RESISTORS
- All resistors are in ohms
- F : nonflammable

COILS
- MMH : mH, UH : μH

Ref.No	Part No	Description			Remark
Q003	8-729-178-54	TRANSISTOR 2SC2785			
Q004	8-729-178-54	TRANSISTOR 2SC2785			
Q005	8-729-178-54	TRANSISTOR 2SC2785			
Q006	8-729-178-54	TRANSISTOR 2SC2785			
Q007	8-729-178-54	TRANSISTOR 2SC2785			
Q008	8-729-178-54	TRANSISTOR 2SC2785			
		RESISTOR			
R001	1-246-776-00	CARBON	270	1/8W	
R002	1-246-776-00	CARBON	270	1/8W	
R003	1-246-773-00	CARBON	150	1/8W	
R005	1-246-776-00	CARBON	270	1/8W	
R006	1-246-795-00	CARBON	10K	1/8W	
R007	1-246-795-00	CARBON	10K	1/8W	
R008	1-246-795-00	CARBON	10K	1/8W	
R015	1-246-773-00	CARBON	150	1/8W	
R016	1-246-773-00	CARBON	150	1/8W	
R018	1-246-776-00	CARBON	270	1/8W	
R019	1-246-773-00	CARBON	150	1/8W	
R020	1-246-773-00	CARBON	150	1/8W	
		SWITCH			
S001	1-553-766-00	SWITCH, KEY BOARD			
S002	1-553-766-00	SWITCH, KEY BOARD			
S003	1-553-766-00	SWITCH, KEY BOARD			
S004	1-553-766-00	SWITCH, KEY BOARD			
S005	1-553-766-00	SWITCH, KEY BOARD			
S006	1-553-766-00	SWITCH, KEY BOARD			
S007	1-553-766-00	SWITCH, KEY BOARD			
S008	1-553-766-00	SWITCH, KEY BOARD			
S009	1-553-766-00	SWITCH, KEY BOARD			
S010	1-553-766-00	SWITCH, KEY BOARD			
S011	1-553-766-00	SWITCH, KEY BOARD			
S012	1-553-766-00	SWITCH, KEY BOARD			
S013	1-553-766-00	SWITCH, KEY BOARD			
S014	1-553-766-00	SWITCH, KEY BOARD			
S016	1-553-766-00	SWITCH, KEY BOARD			
S017	1-553-766-00	SWITCH, KEY BOARD			
S018	1-553-766-00	SWITCH, KEY BOARD			
S019	1-553-766-00	SWITCH, KEY BOARD			
S020	1-553-766-00	SWITCH, KEY BOARD			
S021	1-553-766-00	SWITCH, KEY BOARD			
S022	1-553-766-00	SWITCH, KEY BOARD			
S023	1-553-766-00	SWITCH, KEY BOARD			

****

♠:1-606-231-00 MB-3 BOARD
****

Ref.No	Part No	Description				Remark
		CAPACITOR				
C329	1-161-057-00	CERAMIC	0.033MF	10%	50V	
C802	1-123-611-00	ELECT	1MF	20%	50V	
		DIODE				
D319	8-719-911-19	DIODE 1SS119				
		TRANSISTOR				
Q803	8-729-117-54	TRANSISTOR 2SA1175				
		RESISTOR				
R395	1-246-804-00	CARBON	56K	1/8W		
R805	1-246-807-00	CARBON	100K	1/8W		

****

♠:A-6717-236-A RR-1A BOARD, COMPLETE
****

Ref.No	Part No	Description				Remark
	3-572-085-00	WASHER, FIBER				
	♠:3-670-059-00	BRACKET (RIGHT), RR				
	♠:3-670-060-00	BRACKET (LEFT), RR				
	♠:3-671-850-00	CASE, SHIELD, RR-1				
	3-701-822-00	HOLDER, WIRE				
		CAPACITOR				
C001	1-123-613-00	ELECT	3.3MF	20%	50V	
C002	1-161-021-00	CERAMIC	0.047MF	10%	25V	
C003	1-102-973-00	CERAMIC	100PF	5%	50V	
C101	1-161-021-00	CERAMIC	0.047MF	10%	25V	
C103	1-102-111-00	CERAMIC	270PF	10%	50V	
C104	1-102-824-00	CERAMIC	470PF	5%	50V	
C201	1-161-021-00	CERAMIC	0.047MF	10%	25V	
C202	1-102-824-00	CERAMIC	470PF	5%	50V	
C203	1-102-111-00	CERAMIC	270PF	10%	50V	
C205	1-123-617-00	ELECT	10MF	20%	16V	
C206	1-123-821-00	ELECT	47MF	20%	16V	
C207	1-161-039-00	CERAMIC	0.001MF	10%	25V	
C208	1-161-039-00	CERAMIC	0.001MF	10%	25V	
C209	1-102-112-00	CERAMIC	330PF	10%	50V	
C301	1-123-839-00	ELECT	1000MF	20%	16V	
C302	1-123-820-00	ELECT	33MF	20%	16V	
C303	1-123-611-00	ELECT	1MF	20%	50V	
		CONNECTOR				
CN101	♠:1-560-463-00	PIN, CONNECTOR 8P				
CN102	♠:1-560-469-00	PIN, CONNECTOR 6P				
CN103	♠:1-560-464-00	PIN, CONNECTOR 10P				
CN201	♠:1-560-466-00	PIN, CONNECTOR 3P				
CN202	♠:1-560-467-00	PIN, CONNECTOR 4P				
CN203	♠:1-560-470-00	PIN, CONNECTOR 8P				
CN301	♠:1-560-471-00	PIN, CONNECTOR 10P				
CN302	♠:1-560-456-00	PIN, CONNECTOR 2P				
CN303	♠:1-560-470-00	PIN, CONNECTOR 8P				
		DIODE				
D001	8-719-911-19	DIODE 1SS119				

NOTE:

The components identified by shading and mark ⚠ are critical for safety. Replace only with part number specified.

Les composants identifiés par une trame et une marque ⚠ sont critiques pour la sécurité. Ne les remplacer que par une pièce portant le numéro spécifié.

When indicating parts by reference number, please include the board name.

- =>: Due to standardization, interchangeable replacements may be substituted for parts specified in the diagrams.
- Items marked " ♠ " are not stocked since they are seldom required for routine service. Some delay should be anticipated when ordering these items.

- All variable and adjustable resistors have characteristic curve B, unless otherwise noted.

CAPACITORS
- MF : μF, PF : μμF

RESISTORS
- All resistors are in ohms
- F : nonflammable

COILS
- MMH : mH, UH : μH

RR-1A BOARD

Ref.No	Part No	Description	Remark
D102	8-719-911-19	DIODE 1SS119	
D201	8-719-100-30	DIODE RD5.1E-B2	
D301	8-719-911-19	DIODE 1SS119	
D302	8-719-911-19	DIODE 1SS119	
D305	8-719-200-02	DIODE 10E-2	
D306	8-719-200-02	DIODE 10E-2	
D307	8-719-200-02	DIODE 10E-2	
D308	8-719-200-02	DIODE 10E-2	
D309	8-719-200-02	DIODE 10E-2	
D310	8-719-200-02	DIODE 10E-2	
D311	8-719-200-02	DIODE 10E-2	
D312	8-719-200-02	DIODE 10E-2	
D313	8-719-200-02	DIODE 10E-2	
D314	8-719-200-02	DIODE 10E-2	
D315	8-719-200-02	DIODE 10E-2	
D316	8-719-200-02	DIODE 10E-2	
D317	8-719-911-19	DIODE 1SS119	
D318	8-719-911-19	DIODE 1SS119	
D319	8-719-200-02	DIODE 10E-2	

IC

Ref.No	Part No	Description	Remark
IC001	8-759-103-93	IC UPC393C	
IC101	8-759-115-18	IC UPD651G-518	
IC201	8-759-115-17	IC UPD651G-517	

TRANSISTOR

Ref.No	Part No	Description	Remark
Q101	8-729-178-54	TRANSISTOR 2SC2785	
Q102	8-729-178-54	TRANSISTOR 2SC2785	
Q103	8-729-178-54	TRANSISTOR 2SC2785	
Q104	8-729-178-54	TRANSISTOR 2SC2785	
Q105	8-729-178-54	TRANSISTOR 2SC2785	
Q106	8-729-178-54	TRANSISTOR 2SC2785	
Q108	8-729-178-54	TRANSISTOR 2SC2785	
Q203	8-729-178-54	TRANSISTOR 2SC2785	
Q204	8-729-178-54	TRANSISTOR 2SC2785	
Q301	8-729-177-32	TRANSISTOR 2SD773	
Q302	8-729-177-32	TRANSISTOR 2SD773	
Q303	8-729-113-32	TRANSISTOR 2SB733	
Q304	8-729-113-32	TRANSISTOR 2SB733	
Q305	8-729-177-32	TRANSISTOR 2SD773	
Q306	8-729-177-32	TRANSISTOR 2SD773	
Q307	8-729-113-32	TRANSISTOR 2SB733	
Q308	8-729-113-32	TRANSISTOR 2SB733	
Q309	8-729-116-42	TRANSISTOR 2SD1164	
Q310	8-729-116-42	TRANSISTOR 2SD1164	
Q311	8-729-116-42	TRANSISTOR 2SD1164	
Q312	8-729-116-42	TRANSISTOR 2SD1164	
Q313	8-729-178-54	TRANSISTOR 2SC2785	
Q314	8-729-178-54	TRANSISTOR 2SC2785	
Q315	8-729-178-54	TRANSISTOR 2SC2785	
Q316	8-729-178-54	TRANSISTOR 2SC2785	
Q332	8-729-117-54	TRANSISTOR 2SA1175	

RESISTOR

Ref.No	Part No	Description			Remar
R001	1-246-799-00	CARBON	22K	1/8W	
R002	1-246-807-00	CARBON	100K	1/8W	
R003	1-246-795-00	CARBON	10K	1/8W	
R004	1-246-788-00	CARBON	2.7K	1/8W	
R005	1-246-795-00	CARBON	10K	1/8W	
R006	1-246-805-00	CARBON	68K	1/8W	
R101	1-246-854-00	CARBON	7.5K	1/8W	
R102	1-246-854-00	CARBON	7.5K	1/8W	
R103	1-246-854-00	CARBON	7.5K	1/8W	
R104	1-246-854-00	CARBON	7.5K	1/8W	
R105	1-246-854-00	CARBON	7.5K	1/8W	
R106	1-246-854-00	CARBON	7.5K	1/8W	
R114	1-247-049-00	CARBON	470K	1/8W	
R115	1-246-795-00	CARBON	10K	1/8W	
R118	1-246-795-00	CARBON	10K	1/8W	
R119	1-246-807-00	CARBON	100K	1/8W	
R120	1-246-807-00	CARBON	100K	1/8W	
R130	1-246-773-00	CARBON	150	1/8W	
R131	1-246-773-00	CARBON	150	1/8W	
R132	1-246-773-00	CARBON	150	1/8W	
R133	1-246-773-00	CARBON	150	1/8W	
R134	1-246-773-00	CARBON	150	1/8W	
R135	1-246-773-00	CARBON	150	1/8W	
R201	1-246-781-00	CARBON	680	1/8W	
R203	1-246-805-00	CARBON	68K	1/8W	
R204	1-246-795-00	CARBON	10K	1/8W	
R205	1-247-049-00	CARBON	470K	1/8W	
R208	1-246-799-00	CARBON	22K	1/8W	
R209	1-246-795-00	CARBON	10K	1/8W	
R211	1-246-795-00	CARBON	10K	1/8W	
R212	1-246-795-00	CARBON	10K	1/8W	
R213	1-246-795-00	CARBON	10K	1/8W	
R214	1-246-795-00	CARBON	10K	1/8W	
R215	1-246-795-00	CARBON	10K	1/8W	
R216	1-246-795-00	CARBON	10K	1/8W	
R217	1-246-795-00	CARBON	10K	1/8W	
R218	1-246-807-00	CARBON	100K	1/8W	
R219	1-246-795-00	CARBON	10K	1/8W	
R220	1-246-795-00	CARBON	10K	1/8W	
R223	1-246-795-00	CARBON	10K	1/8W	
R224	1-246-795-00	CARBON	10K	1/8W	
R225	1-246-807-00	CARBON	100K	1/8W	
R226	1-246-795-00	CARBON	10K	1/8W	
R227	1-246-789-00	CARBON	3.3K	1/8W	
R228	1-246-780-00	CARBON	560	1/8W	
R229	1-246-795-00	CARBON	10K	1/8W	
R230	1-246-783-00	CARBON	1K	1/8W	
R231	1-246-783-00	CARBON	1K	1/8W	
R232	1-246-807-00	CARBON	100K	1/8W	
R234	1-246-795-00	CARBON	10K	1/8W	
R235	1-246-776-00	CARBON	270	1/8W	

NOTE:

The components identified by shading and mark ⚠ are critical for safety.
Replace only with part number specified.

Les composants identifiés par une trame et une marque ⚠ sont critiques pour la sécurité. Ne les remplacer que par une pièce portant le numéro spécifié.

When indicating parts by reference number, please include the board name.

- =>: Due to standardization, interchangeable replacements may be substituted for parts specified in the diagrams.

- Items marked " ♠ " are not stocked since they are seldom required for routine service. Some delay should be anticipated when ordering these items.

- All variable and adjustable resistors have characteristic curve B, unless otherwise noted.

CAPACITORS
- MF : μF, PF : μμF

RESISTORS
- All resistors are in ohms
- F : nonflammable

COILS
- MMH : mH, UH : μH

RR-1A BOARD **TU-22 BOARD** **TU-21 BOARD**

Ref.No	Part No	Description				Remark
R236	1-246-803-00	CARBON	47K		1/8W	
R240	1-246-787-00	CARBON	2.2K		1/8W	
R301	1-246-783-00	CARBON	1K		1/8W	
R302	1-246-783-00	CARBON	1K		1/8W	
R303	1-246-789-00	CARBON	3.3K		1/8W	
R304	1-246-789-00	CARBON	3.3K		1/8W	
R305	1-246-843-00	CARBON	910		1/8W	
R306	1-246-843-00	CARBON	910		1/8W	
R307	1-246-783-00	CARBON	1K		1/8W	
R308	1-246-783-00	CARBON	1K		1/8W	
R309	1-246-789-00	CARBON	3.3K		1/8W	
R310	1-246-789-00	CARBON	3.3K		1/8W	
R311	1-246-843-00	CARBON	910		1/8W	
R312	1-246-843-00	CARBON	910		1/8W	
R313	1-246-783-00	CARBON	1K		1/8W	
R314	1-246-783-00	CARBON	1K		1/8W	
R315	1-246-783-00	CARBON	1K		1/8W	
R316	1-246-783-00	CARBON	1K		1/8W	
R317	1-246-789-00	CARBON	3.3K		1/8W	
R320	1-246-787-00	CARBON	2.2K		1/8W	
R321	1-246-807-00	CARBON	100K		1/8W	
R322	1-246-807-00	CARBON	100K		1/8W	
R323	1-246-787-00	CARBON	2.2K		1/8W	
R324	1-246-787-00	CARBON	2.2K		1/8W	
R325	1-246-807-00	CARBON	100K		1/8W	
R326	1-246-807-00	CARBON	100K		1/8W	
R327	1-246-787-00	CARBON	2.2K		1/8W	
R328	1-246-793-00	CARBON	6.8K		1/8W	
R329	1-246-791-00	CARBON	4.7K		1/8W	
R330	1-246-791-00	CARBON	4.7K		1/8W	
R331	1-246-791-00	CARBON	4.7K		1/8W	
R332	1-246-797-00	CARBON	15K		1/8W	
R333⚠	1-247-587-00	CARBON	0.47	5%	1/4W	
R334	1-246-795-00	CARBON	10K		1/8W	
R335	1-206-640-00	METAL	100	5%	2W	F
R336	1-206-640-00	METAL	100	5%	2W	F
R337	1-246-794-00	CARBON	8.2K		1/8W	

CRYSTAL

Ref.No	Part No	Description
X101	1-527-532-31	OSCILLATOR, CERAMIC
X201	1-527-532-31	OSCILLATOR, CERAMIC

****

♠:1-605-575-00 TU-22 BOARD
****

****

♠:A-6721-086-A TU-21 BOARD, COMPLETE
****

Ref.No	Part No	Description
	♠:1-555-716-00	CABLE, PIN
	1-555-798-00	CORD (WITH DC PLUG)
	♠:3-671-841-00	CASE (1) (MAIN), SHIELD, TU
	♠:3-671-842-00	LID, CASE (1), SHIELD, TU
	♠:3-671-843-00	LID, REAR, CASE (1), SHIELD, TU
	♠:3-671-844-00	CASE (2) (MAIN), SHIELD, TU
	♠:3-671-845-00	LID, CASE (2), SHIELD, TU
	♠:3-671-846-00	LID, REAR, CASE (2), SHIELD, TU
	♠:3-671-847-00	CASE (3) (MAIN), SHIELD, TU
	♠:3-671-848-00	LID, CASE (3), SHIELD, TU
	♠:3-671-849-00	LID, REAR, CASE (3), SHIELD, TU

BATTERY

Ref.No	Part No	Description
BT491	1-528-074-00	BATTERY, NICKEL CADMIUM

CAPACITOR

Ref.No	Part No	Description				Remark
C064	1-123-330-00	ELECT	22MF	20%	16V	
C101	1-102-074-00	CERAMIC	0.001MF	10%	50V	
C102	1-123-380-00	ELECT	1MF	20%	50V	
C103	1-102-121-00	CERAMIC	0.0022MF	10%	50V	
C104	1-102-074-00	CERAMIC	0.001MF	10%	50V	
C105	1-102-513-00	CERAMIC	18PF	5%	50V	
C106	1-102-074-00	CERAMIC	0.001MF	10%	50V	
C107	1-123-330-00	ELECT	22MF	20%	16V	
C108	1-123-333-00	ELECT	100MF	20%	16V	
C109	1-108-242-00	MYLAR	0.022MF	10%	50V	
C110	1-131-404-00	ELECT(SOLID)	0.22MF	10%	25V	
C111	1-131-404-00	ELECT(SOLID)	0.22MF	10%	25V	
C112	1-102-526-00	CERAMIC	75PF	5%	50V	
C113	1-101-004-00	CERAMIC	0.01MF		50V	
C114	1-101-884-00	CERAMIC	56PF	5%	50V	
C115	1-101-884-00	CERAMIC	56PF	5%	50V	
C116	1-102-121-00	CERAMIC	0.0022MF	10%	50V	
C117	1-102-953-00	CERAMIC	18PF	5%	50V	
C119	1-123-333-00	ELECT	100MF	20%	16V	
C120	1-123-330-00	ELECT	22MF	20%	16V	
C121	1-108-567-00	MYLAR	0.0033MF	5%	50V	
C122	1-123-328-00	ELECT	4.7MF	20%	25V	
C123	1-123-330-00	ELECT	22MF	20%	16V	
C124	1-102-960-00	CERAMIC	24PF	5%	50V	
C125	1-102-971-00	CERAMIC	82PF	5%	50V	
C126	1-161-059-00	CERAMIC	0.047MF	10%	50V	
C127	1-102-526-00	CERAMIC	75PF	5%	50V	
C128	1-123-330-00	ELECT	22MF	20%	16V	
C129	1-123-380-00	ELECT	1MF	20%	50V	
C130	1-108-583-00	MYLAR	0.015MF	5%	50V	
C131	1-123-379-00	ELECT	0.47MF	20%	50V	
C132	1-102-074-00	CERAMIC	0.001MF	10%	50V	
C151	1-123-839-00	ELECT	1000MF	20%	16V	
C152	1-123-330-00	ELECT	22MF	20%	16V	
C153	1-123-330-00	ELECT	22MF	20%	16V	
C155	1-130-495-00	MYLAR	0.1MF	5%	50V	
C156	1-123-330-00	ELECT	22MF	20%	16V	
C157	1-123-330-00	ELECT	22MF	20%	16V	
C201	1-101-004-00	CERAMIC	0.01MF		50V	
C202	1-123-330-00	ELECT	22MF	20%	16V	

NOTE:

The components identified by shading and mark ⚠ are critical for safety. Replace only with part number specified.

Les composants identifiés par une trame et une marque ⚠ sont critiques pour la sécurité. Ne les remplacer que par une pièce portant le numéro spécifié.

When indicating parts by reference number, please include the board name.

- =>: Due to standardization, interchangeable replacements may be substituted for parts specified in the diagrams.
- Items marked " ♠ " are not stocked since they are seldom required for routine service. Some delay should be anticipated when ordering these items.

- All variable and adjustable resistors have characteristic curve B, unless otherwise noted.

CAPACITORS
- MF : μF, PF : μμF

RESISTORS
- All resistors are in ohms
- F : nonflammable

COILS
- MMH : mH, UH : μH

TU-21 BOARD

Ref.No	Part No	Description			Remark
C203	1-161-059-00	CERAMIC	0.047MF	10%	50V
C204	1-123-379-00	ELECT	0.47MF	20%	50V
C205	1-102-973-00	CERAMIC	100PF	5%	50V
C206	1-108-555-00	MYLAR	0.001MF	5%	50V
C207	1-108-555-00	MYLAR	0.001MF	5%	50V
C208	1-108-559-00	MYLAR	0.0015MF	5%	50V
C209	1-123-381-00	ELECT	2.2MF	20%	50V
C210	1-102-973-00	CERAMIC	100PF	5%	50V
C211	1-102-959-00	CERAMIC	22PF	5%	50V
C212	1-130-499-51	MYLAR	0.22MF	5%	50V
C214	1-130-489-51	MYLAR	0.033MF	5%	50V
C217	1-130-483-51	MYLAR	0.01MF	5%	50V
C219	1-123-321-00	ELECT	220MF	20%	16V
C221	1-102-973-00	CERAMIC	100PF	5%	50V
C421	1-101-004-00	CERAMIC	0.01MF		50V
C422	1-123-252-00	ELECT	1MF		160V
C423	1-123-383-00	ELECT	4.7MF	20%	100V
C424	1-123-369-00	ELECT	4.7MF	20%	50V
C425	1-106-367-00	MYLAR	0.01MF	5%	200V
C426	1-123-622-00	ELECT	22MF	20%	16V
C427	1-161-059-00	CERAMIC	0.047MF	10%	50V
C428	1-161-059-00	CERAMIC	0.047MF	10%	50V
C429	1-123-622-00	ELECT	22MF	20%	16V

FILTER

CF101	1-409-332-00	CERAMIC TRAP (4.5MHZ)
CF102	1-527-260-00	FILTER, CERAMIC (4.5MHZ)
CF103	1-409-332-00	CERAMIC TRAP (4.5MHZ)

CONNECTOR

CN001♦:	1-560-469-00	PIN, CONNECTOR 6P
CN002♦:	1-560-468-00	PIN, CONNECTOR 5P
CN004♦:	1-560-467-00	PIN, CONNECTOR 4P
CN005♦:	1-560-470-00	PIN, CONNECTOR 8P
CN006♦:	1-560-467-00	PIN, CONNECTOR 4P
CN007♦:	1-560-467-00	PIN, CONNECTOR 4P
CN008♦:	1-560-467-00	PIN, CONNECTOR 4P
CN009♦:	1-560-472-00	PIN, CONNECTOR 12P
CN010♦:	1-560-468-00	PIN, CONNECTOR 5P
CN012♦:	1-560-470-00	PIN, CONNECTOR 8P
CN013♦:	1-560-468-00	PIN, CONNECTOR 5P

COMPOSITION CIRCUIT BLOCK

CP201	1-232-154-00	COMPOSITION CIRCUIT BLOCK
CP501	1-232-160-00	COMPOSITION CIRCUIT BLOCK
CP502	1-232-160-00	COMPOSITION CIRCUIT BLOCK
CP503	1-232-161-00	COMPOSITION CIRCUIT BLOCK

DIODE

D101	8-719-911-19	DIODE 1SS119
D102	8-719-911-19	DIODE 1SS119
D103	8-719-911-19	DIODE 1SS119
D201	8-719-911-19	DIODE 1SS119

Ref.No	Part No	Description	Remark
D202	8-719-911-19	DIODE 1SS119	
D203	8-719-911-19	DIODE 1SS119	
D204	8-719-911-19	DIODE 1SS119	
D205	8-719-911-19	DIODE 1SS119	
D206	8-719-911-19	DIODE 1SS119	
D207	8-719-911-19	DIODE 1SS119	
D210	8-719-911-19	DIODE 1SS119	
D211	8-719-911-19	DIODE 1SS119	
D212	8-719-911-19	DIODE 1SS119	
D213	8-719-911-19	DIODE 1SS119	
D214	8-719-911-19	DIODE 1SS119	
D215	8-719-911-19	DIODE 1SS119	
D421	=>8-719-305-15	DIODE GH-3F	
D422	8-719-305-15	DIODE GH-3F	
D423	8-719-305-15	DIODE GH-3F	
D424	8-719-124-07	DIODE RD24E-B	
D425	8-719-911-19	DIODE 1SS119	
D426	8-719-911-19	DIODE 1SS119	
D501	8-719-911-19	DIODE 1SS119	
D502	8-719-911-19	DIODE 1SS119	
D503	8-719-911-19	DIODE 1SS119	
D504	8-719-911-19	DIODE 1SS119	
D505	8-719-911-19	DIODE 1SS119	
D506	8-719-911-19	DIODE 1SS119	
D507	8-719-911-19	DIODE 1SS119	
D508	8-719-911-19	DIODE 1SS119	
D509	8-719-911-19	DIODE 1SS119	
D510	8-719-911-19	DIODE 1SS119	
D511	8-719-911-19	DIODE 1SS119	
D512	8-719-911-19	DIODE 1SS119	
D513	8-719-911-19	DIODE 1SS119	
D514	8-719-911-19	DIODE 1SS119	

IC

IC101	8-758-851-00	IC CX-885A
IC201	=>8-757-605-00	IC CX-760E
IC202	8-757-611-00	IC CX-761A
IC203	8-758-040-00	IC CX-804
IC204	8-759-157-40	IC UPC574J
IC501	8-759-240-71	IC TC4071BP
IC502	8-759-240-71	IC TC4071BP

COIL

L101	1-408-408-00	MICRO INDUCTOR 8.2UH
L102	1-408-411-00	MICRO INDUCTOR 15UH
L103	1-408-399-00	MICRO INDUCTOR 1.5UH
L104	1-408-403-00	MICRO INDUCTOR 3.3UH
L105	1-408-414-00	MICRO INDUCTOR 27UH
L106	1-408-420-00	MICRO INDUCTOR 82UH
L108	1-408-410-00	MICRO INDUCTOR 12UH
L109	1-407-510-00	MICRO INDUCTOR 33MMH
L110	1-408-421-00	MICRO INDUCTOR 100UH
L201	1-408-421-00	MICRO INDUCTOR 100UH

NOTE:

The components identified by shading and mark ⚠ are critical for safety.
Replace only with part number specified.

Les composants identifiés par une trame et une marque ⚠ sont critiques pour la sécurité.
Ne les remplacer que par une pièce portant le numéro spécifié.

When indicating parts by reference number, please include the board name.

- =>: Due to standardization, interchangeable replacements may be substituted for parts specified in the diagrams.
- Items marked " ♦ " are not stocked since they are seldom required for routine service. Some delay should be anticipated when ordering these items.

- All variable and adjustable resistors have characteristic curve B, unless otherwise noted.

CAPACITORS
- MF : μF, PF : μμF

RESISTORS
- All resistors are in ohms
- F : nonflammable

COILS
- MMH : mH, UH : μH

Ref.No	Part No	Description				Remark
L421	1-408-421-00	MICRO INDUCTOR 100UH				
		CONNECTOR				
PJ101♠:	1-526-575-00	SOCKET, PLUG				
PJ102♠:	1-526-575-00	SOCKET, PLUG				
		TRANSISTOR				
Q053	8-729-178-54	TRANSISTOR 2SC2785				
Q101	8-729-178-54	TRANSISTOR 2SC2785				
Q103	8-729-178-54	TRANSISTOR 2SC2785				
Q104	8-729-178-54	TRANSISTOR 2SC2785				
Q105	8-729-117-54	TRANSISTOR 2SA1175				
Q106	8-729-117-54	TRANSISTOR 2SA1175				
Q151	8-729-178-54	TRANSISTOR 2SC2785				
Q201	8-729-178-54	TRANSISTOR 2SC2785				
Q202	8-729-178-54	TRANSISTOR 2SC2785				
Q203	8-729-178-54	TRANSISTOR 2SC2785				
Q204	8-729-178-54	TRANSISTOR 2SC2785				
Q205	8-729-178-54	TRANSISTOR 2SC2785				
Q206	8-729-178-54	TRANSISTOR 2SC2785				
Q207	8-729-178-54	TRANSISTOR 2SC2785				
Q208	8-729-139-04	TRANSISTOR 2N3904				
Q209	8-724-375-01	TRANSISTOR 2SC403C				
Q213	8-729-117-54	TRANSISTOR 2SA1175				
Q214	8-729-117-54	TRANSISTOR 2SA1175				
Q215	8-729-117-54	TRANSISTOR 2SA1175				
Q216	8-729-178-54	TRANSISTOR 2SC2785				
Q401	8-729-178-54	TRANSISTOR 2SC2785				
Q402	8-729-117-54	TRANSISTOR 2SA1175				
Q403	8-729-178-54	TRANSISTOR 2SC2785				
Q405	8-729-178-54	TRANSISTOR 2SC2785				
Q406	8-729-117-54	TRANSISTOR 2SA1175				
Q421	8-729-177-43	TRANSISTOR 2SD774				
Q422	8-729-194-12	TRANSISTOR 2SC1941				
Q501	8-729-178-54	TRANSISTOR 2SC2785				
Q502	8-729-117-54	TRANSISTOR 2SA1175				
		RESISTOR				
R060	1-246-789-00	CARBON	3.3K		1/8W	
R061	1-246-783-00	CARBON	1K		1/8W	
R062	1-246-848-00	CARBON	2.4K		1/8W	
R063	1-246-791-00	CARBON	4.7K		1/8W	
R101	1-246-787-00	CARBON	2.2K		1/8W	
R102	1-246-790-00	CARBON	3.9K		1/8W	
R103	1-246-787-00	CARBON	2.2K		1/8W	
R104	1-246-800-00	CARBON	27K		1/8W	
R105	1-246-785-00	CARBON	1.5K		1/8W	
R106	1-246-790-00	CARBON	3.9K		1/8W	
R107	1-246-789-00	CARBON	3.3K		1/8W	
R108	1-246-783-00	CARBON	1K		1/8W	
R109	1-246-804-00	CARBON	56K		1/8W	
R110	1-246-807-00	CARBON	100K		1/8W	
R111	1-246-802-00	CARBON	39K		1/8W	

Ref.No	Part No	Description				Remark
R112	1-246-782-00	CARBON	820		1/8W	
R113	1-247-047-00	CARBON	330K		1/8W	
R114	1-246-777-00	CARBON	330		1/8W	
R115	1-246-850-00	CARBON	3.6K		1/8W	
R116	1-246-850-00	CARBON	3.6K		1/8W	
R119	1-246-778-00	CARBON	390		1/8W	
R121	1-246-776-00	CARBON	270		1/8W	
R122	1-246-807-00	CARBON	100K		1/8W	
R123	1-246-786-00	CARBON	1.8K		1/8W	
R124	1-246-776-00	CARBON	270		1/8W	
R125	1-246-852-00	CARBON	5.1K		1/8W	
R126	1-246-795-00	CARBON	10K		1/8W	
R127	1-246-787-00	CARBON	2.2K		1/8W	
R128	1-246-789-00	CARBON	3.3K		1/8W	
R129⚠.	1-247-107-00	CARBON	100	5%	1/4W	F
R130	1-246-783-00	CARBON	1K		1/8W	
R131	1-246-786-00	CARBON	1.8K		1/8W	
R132	1-246-791-00	CARBON	4.7K		1/8W	
R133	1-246-779-00	CARBON	470		1/8W	
R134	1-246-807-00	CARBON	100K		1/8W	
R135	1-246-777-00	CARBON	330		1/8W	
R151	1-246-807-00	CARBON	100K		1/8W	
R153	1-246-799-00	CARBON	22K		1/8W	
R154⚠.	1-247-082-00	CARBON	8.2	5%	1/4W	F
R201	1-246-783-00	CARBON	1K		1/8W	
R203	1-246-803-00	CARBON	47K		1/8W	
R204	1-246-796-00	CARBON	12K		1/8W	
R205	1-246-801-00	CARBON	33K		1/8W	
R206	1-246-803-00	CARBON	47K		1/8W	
R207	1-246-806-00	CARBON	82K		1/8W	
R208	1-246-795-00	CARBON	10K		1/8W	
R209	1-246-799-00	CARBON	22K		1/8W	
R210	1-246-795-00	CARBON	10K		1/8W	
R211	1-246-795-00	CARBON	10K		1/8W	
R212	1-246-859-00	CARBON	20K		1/8W	
R213	1-246-795-00	CARBON	10K		1/8W	
R214	1-246-795-00	CARBON	10K		1/8W	
R215	1-246-859-00	CARBON	20K		1/8W	
R216	1-246-795-00	CARBON	10K		1/8W	
R217	1-246-795-00	CARBON	10K		1/8W	
R218	1-246-811-00	CARBON	220K		1/8W	
R219	1-246-795-00	CARBON	10K		1/8W	
R220	1-246-795-00	CARBON	10K		1/8W	
R221	1-244-885-00	CARBON	3.3K	5%	1/2W	
R222	1-246-795-00	CARBON	10K		1/8W	
R223	1-246-801-00	CARBON	33K		1/8W	
R224	1-246-806-00	CARBON	82K		1/8W	
R225	1-246-783-00	CARBON	1K		1/8W	
R226	1-246-807-00	CARBON	100K		1/8W	
R227	1-246-811-00	CARBON	220K		1/8W	
R228	1-244-873-00	CARBON	1K	5%	1/2W	
R229	1-246-795-00	CARBON	10K		1/8W	
R230	1-247-047-00	CARBON	330K		1/8W	

NOTE:

The components identified by shading and mark ⚠ are critical for safety.
Replace only with part number specified.

Les composants identifiés par une trame et une marque ⚠ sont critiques pour la sécurité. Ne les remplacer que par une pièce portant le numéro spécifié.

When indicating parts by reference number, please include the board name.

- =>: Due to standardization, interchangeable replacements may be substituted for parts specified in the diagrams.
- Items marked " ♠ " are not stocked since they are seldom required for routine service. Some delay should be anticipated when ordering these items.

- All variable and adjustable resistors have characteristic curve B, unless otherwise noted.

CAPACITORS
- MF : μF, PF : μμF

RESISTORS
- All resistors are in ohms
- F : nonflammable

COILS
- MMH : mH, UH : μH

TU-21 BOARD SW-12 BOARD

Ref.No	Part No	Description				Remark
R231	1-246-801-00	CARBON	33K		1/8W	
R232	1-246-777-00	CARBON	330		1/8W	
R233	1-246-783-00	CARBON	1K		1/8W	
R234	1-246-799-00	CARBON	22K		1/8W	
R235	1-246-795-00	CARBON	10K		1/8W	
R236	1-246-795-00	CARBON	10K		1/8W	
R237	1-246-807-00	CARBON	100K		1/8W	
R238	1-246-795-00	CARBON	10K		1/8W	
R239	1-246-795-00	CARBON	10K		1/8W	
R241	1-246-798-00	CARBON	18K		1/8W	
R242	1-246-788-00	CARBON	2.7K		1/8W	
R243	1-246-475-00	CARBON	1.2K	5%	1/4W	
R244	1-246-801-00	CARBON	33K		1/8W	
R245	1-202-667-00	COMPOSITION	8.2M	5%	1/2W	
R247	1-246-805-00	CARBON	68K		1/8W	
R249	1-246-521-00	CARBON	100K	5%	1/4W	
R259	1-246-807-00	CARBON	100K		1/8W	
R260	1-246-807-00	CARBON	100K		1/8W	
R261	1-246-799-00	CARBON	22K		1/8W	
R262	1-246-787-00	CARBON	2.2K		1/8W	
R263	1-246-799-00	CARBON	22K		1/8W	
R264	1-246-787-00	CARBON	2.2K		1/8W	
R265	1-246-799-00	CARBON	22K		1/8W	
R267	1-246-807-00	CARBON	100K		1/8W	
R269	1-246-787-00	CARBON	2.2K		1/8W	
R275	1-246-795-00	CARBON	10K		1/8W	
R276	1-246-789-00	CARBON	3.3K		1/8W	
R277	1-246-794-00	CARBON	8.2K	5%	1/8W	
R277	1-247-053-00	CARBON	1M		1/8W	
R278	1-246-805-00	CARBON	68K		1/8W	
R401	1-246-852-00	CARBON	5.1K		1/8W	
R402	1-246-795-00	CARBON	10K		1/8W	
R407	1-246-795-00	CARBON	10K		1/8W	
R408	1-246-795-00	CARBON	10K		1/8W	
R421	1-246-783-00	CARBON	1K		1/8W	
R422	1-246-775-00	CARBON	220		1/8W	
R423	1-244-909-00	CARBON	33K	5%	1/2W	
R424	1-244-905-00	CARBON	22K	5%	1/2W	
R425	1-246-795-00	CARBON	10K		1/8W	
R426	1-246-795-00	CARBON	10K		1/8W	
R427	1-246-787-00	CARBON	2.2K		1/8W	
R428	1-246-801-00	CARBON	33K		1/8W	
R429	1-247-047-00	CARBON	330K	5%	1/8W	
R491⚠.	1-212-850-00	FUSIBLE	5.1	5%	1/4W	F
R501	1-246-803-00	CARBON	47K		1/8W	
R502	1-246-803-00	CARBON	47K		1/8W	
R503	1-246-795-00	CARBON	10K		1/8W	
R504	1-246-801-00	CARBON	33K		1/8W	
R505	1-246-803-00	CARBON	47K		1/8W	
R506	1-246-803-00	CARBON	47K		1/8W	
R507	1-246-788-00	CARBON	2.7K		1/8W	

Ref.No	Part No	Description	Remark
		RF UNIT	
RF101	1-464-151-00	UNIT, COLOR RF (RF-7W(M))	
		VARIABLE RESISTOR	
RV101	1-224-251-XX	RES, ADJ, METAL GLAZE 4.7K	
RV102	1-224-251-XX	RES, ADJ, METAL GLAZE 4.7K	
		FILTER	
SF101	1-404-227-41	SAWF	
		TRANSFORMER	
T101	1-404-153-00	VIFT	
T102	1-404-321-00	VIFT	
T103	1-404-352-00	COIL, VIF	
T104	1-404-318-00	SIFT	
T105	1-404-352-00	COIL, VIF	
T201	1-409-193-00	COIL 3.58MHZ TRAP	
T421	1-421-436-00	TRANSFORMER, FERRITE	
		THERMISTOR	
TH101	1-800-626-00	THERMISTOR	
		TUNER	
TU101	1-463-377-00	TUNER (BT-864)	

****

	♠:1-605-410-00	SW-12 BOARD ***********	
	3-701-822-00	HOLDER, WIRE	
		DIODE	
D501	8-719-911-06	DIODE 1SS106	
D502	8-719-911-06	DIODE 1SS106	
D503	8-719-911-06	DIODE 1SS106	
D504	8-719-168-07	DIODE RD6.8E-B	
D505	8-719-168-07	DIODE RD6.8E-B	
		VARIABLE RESISTOR	
RV501	1-228-244-00	RES, VAR, SOLID 100K	
RV502	1-228-359-00	RES, VAR, SOLID 5K	
		SWITCH	
S501	1-553-766-00	SWITCH, KEY BOARD	
S502	1-553-766-00	SWITCH, KEY BOARD	
S503	1-553-716-00	SWITCH, SLIDE	
S504	1-553-754-00	SWITCH, SLIDE	

NOTE:

The components identified by shading and mark ⚠ are critical for safety. Replace only with part number specified.

Les composants identifiés par une trame et une marque ⚠ sont critiques pour la sécurité. Ne les remplacer que par une pièce portant le numéro spécifié.

When indicating parts by reference number, please include the board name.

- =>: Due to standardization, interchangeable replacements may be substituted for parts specified in the diagrams.
- Items marked " ♠ " are not stocked since they are seldom required for routine service. Some delay should be anticipated when ordering these items.

- All variable and adjustable resistors have characteristic curve B, unless otherwise noted.

CAPACITORS
- MF : μF, PF : μμF

RESISTORS
- All resistors are in ohms
- F : nonflammable

COILS
- MMH : mH, UH : μH

CH-22 BOARD **CH-21 BOARD** **CI-3 BOARD**
CI-2 BOARD **RL-4 BOARD** **LM-9 BOARD** **LM-8 BOARD**

Ref.No	Part No	Description	Remark
	A-6728-243-A	LM-8 BOARD, COMPLETE ********************	
		CAPACITOR	
C101	1-161-057-00	CERAMIC 0.033MF 10% 50V	
C102	1-161-057-00	CERAMIC 0.033MF 10% 50V	
		COIL	
L101	1-408-120-00	MICRO INDUCTOR 18UH	
L102	1-408-120-00	MICRO INDUCTOR 18UH	
**************	**************	**************	**************
	1-605-109-00	LM-9 BOARD **********	
		CAPACITOR	
C001	1-161-057-00	CERAMIC 0.033MF 10% 50V	
C002	1-161-057-00	CERAMIC 0.033MF 10% 50V	
		DIODE	
D001	8-719-911-06	DIODE 1SS106	
D002	8-719-911-06	DIODE 1SS106	
D003	8-719-911-06	DIODE 1SS106	
		COIL	
L001	1-407-696-00	MICRO INDUCTOR 18UH	
L002	1-407-696-00	MICRO INDUCTOR 18UH	
		SWITCH	
S001	1-552-664-00	SWITCH, MICRO	
**************	**************	**************	**************
	♠:1-605-110-00	RL-4 BOARD **********	
**************	**************	**************	**************
	A-6728-248-A	CI-2 BOARD, COMPLETE ********************	
	1-553-719-00	SWITCH, MICRO	
	♠:3-670-039-00	HOLDER (R), CSW	
**************	**************	**************	**************
	A-6728-249-A	CI-3 BOARD, COMPLETE ********************	
	1-553-719-00	SWITCH, MICRO	
	♠:3-670-038-00	HOLDER (L), CSW	

Ref.No	Part No	Description	Remark
	1-605-581-00	CH-21 BOARD ***********	
	♠:3-662-227-00	HOLDER (R-3), LED	
		CAPACITOR	
C701	1-161-021-00	CERAMIC 0.047MF 10% 25V	
		DIODE	
D751	8-719-812-31	DIODE TLR123	
D752	8-719-812-32	DIODE TLY123	
D753	8-719-812-33	DIODE TLG123	
D754	8-719-911-19	DIODE 1SS119	
D755	8-719-812-31	DIODE TLR123	
D756	8-719-812-31	DIODE TLR123	
D757	8-719-812-31	DIODE TLR123	
D758	8-719-812-31	DIODE TLR123	
D759	8-719-812-31	DIODE TLR123	
		IC	
IC701	8-759-619-03	IC M51903L	
		RESISTOR	
R752	1-246-782-00	CARBON 820 1/8W	
R753	1-246-783-00	CARBON 1K 1/8W	
R754	1-246-795-00	CARBON 10K 1/8W	
R755	1-246-787-00	CARBON 2.2K 1/8W	
R756	1-246-787-00	CARBON 2.2K 1/8W	
R757	1-246-787-00	CARBON 2.2K 1/8W	
R758	1-246-787-00	CARBON 2.2K 1/8W	
R759	1-246-787-00	CARBON 2.2K 1/8W	
		SWITCH	
S751	1-553-766-00	SWITCH, KEY BOARD	
S752	1-553-766-00	SWITCH, KEY BOARD	
S753	1-553-766-00	SWITCH, KEY BOARD	
S754	1-553-716-00	SWITCH, SLIDE	
S755	1-553-716-00	SWITCH, SLIDE	
**************	**************	**************	**************
	1-605-895-00	CH-22 BOARD ***********	
		NEON LAMP	
NL701	1-519-204-00	LAMP, NEON	
NL702	1-519-204-00	LAMP, NEON	
NL703	1-519-204-00	LAMP, NEON	
NL704	1-519-204-00	LAMP, NEON	
NL705	1-519-204-00	LAMP, NEON	
NL706	1-519-204-00	LAMP, NEON	
NL707	1-519-204-00	LAMP, NEON	
NL708	1-519-204-00	LAMP, NEON	
NL709	1-519-204-00	LAMP, NEON	

NOTE:

The components identified by shading and mark ⚠ are critical for safety.
Replace only with part number specified.

Les composants identifiés par une trame et une marque ⚠ sont critiques pour la sécurité.
Ne les remplacer que par une pièce portant le numéro spécifié.

When indicating parts by reference number, please include the board name.

- =>: Due to standardization, interchangeable replacements may be substituted for parts specified in the diagrams.
- Items marked " ♠ " are not stocked since they are seldom required for routine service. Some delay should be anticipated when ordering these items.

- All variable and adjustable resistors have characteristic curve B, unless otherwise noted.

CAPACITORS
- MF : μF, PF : μμF

RESISTORS
- All resistors are in ohms
- F : nonflammable

COILS
- MMH : mH, UH : μH

CH-22 BOARD | RL-7 BOARD | N BOARD | TIMER BLOCK

Ref.No	Part No	Description				Remark
NL710	1-519-204-00	LAMP, NEON				
NL711	1-519-204-00	LAMP, NEON				
NL712	1-519-204-00	LAMP, NEON				
NL713	1-519-204-00	LAMP, NEON				
NL714	1-519-204-00	LAMP, NEON				
		SWITCH				
S701	1-553-766-00	SWITCH, KEY BOARD				
S702	1-553-766-00	SWITCH, KEY BOARD				
S703	1-553-766-00	SWITCH, KEY BOARD				
S704	1-553-766-00	SWITCH, KEY BOARD				
S705	1-553-766-00	SWITCH, KEY BOARD				
S706	1-553-766-00	SWITCH, KEY BOARD				
S707	1-553-766-00	SWITCH, KEY BOARD				
S708	1-553-766-00	SWITCH, KEY BOARD				
S709	1-553-766-00	SWITCH, KEY BOARD				
S710	1-553-766-00	SWITCH, KEY BOARD				
S711	1-553-766-00	SWITCH, KEY BOARD				
S712	1-553-766-00	SWITCH, KEY BOARD				
S713	1-553-766-00	SWITCH, KEY BOARD				
S714	1-553-766-00	SWITCH, KEY BOARD				
**						
	♠:1-606-001-00	RL-7 BOARD **********				
	♠:3-670-167-00	INSULATOR				
		CONNECTOR				
CN001	♠:1-560-472-00	PIN, CONNECTOR 12P				
CN002	♠:1-560-470-00	PIN, CONNECTOR 8P				
		DIODE				
D201	8-719-911-06	DIODE 1SS106				
D202	8-719-911-06	DIODE 1SS106				
D203	8-719-911-06	DIODE 1SS106				
**						
	1-603-976-00	N BOARD *******				
	1-232-004-00	COMPOSITION CIRCUIT BLOCK				
	♠:4-348-551-00	PLATE, SHIELD				
		CAPACITOR				
C001	1-123-617-00	ELECT	10MF	20%	16V	
C002	1-123-617-00	ELECT	10MF	20%	16V	
C003	1-123-617-00	ELECT	10MF	20%	16V	
C004	1-161-019-00	CERAMIC	0.033MF	10%	25V	
C005	1-108-567-00	MYLAR	0.0033MF	5%	50V	
		DIODE				
D001	=>8-719-110-32	DIODE PH302B				

Ref.No	Part No	Description				Remar
		IC				
IC001	8-759-113-73	IC UPC1373H				
		COIL				
L001	1-404-310-00	COIL				
**						
	1-548-552-00	TIMER BLOCK ***********				
	9-982-255-00	FLOURECENT DISPLAY				
		CAPACITOR				
C1	1-123-333-00	ELECT	100MF	20%	25V	
C2	1-101-006-00	CERAMIC	0.047MF	Z%	50V	
C3	1-102-074-00	CERAMIC	0.001MF	10%	50V	
C4	1-123-359-00	ELECT	47MF	20%	50V	
C5	1-102-074-00	CERAMIC	0.001MF	10%	50V	
C6	1-123-306-00	ELECT	47MF	20%	10V	
C7	1-123-381-00	ELECT	2.2MF	20%	100V	
C8	1-102-121-00	CERAMIC	0.0022MF	10%	50V	
C9	1-123-306-00	ELECT	47MF	20%	10V	
C10	1-123-382-00	ELECT	3.3MF	20%	100V	
C11	1-102-508-00	CERAMIC	10PF	5%	50V	
C12	9-982-056-00	TRIMMER	4PF TO 28PF			
C13	1-123-382-00	ELECT	3.3MF	20%	50V	
C15	1-102-129-00	CERAMIC	0.01MF	10%	50V	
C16	1-102-038-00	CERAMIC	0.001MF		500V	
C17	1-101-006-00	CERAMIC	0.047MF	Z%	50V	
C18	1-102-038-00	CERAMIC	0.001MF		500V	
		COMPOSITION CIRCUIT BLOCK				
CP1	9-982-069-00	COMPOSITION CIRCUIT BLOCK 220Kx4				
		DIODE				
D1	8-719-911-19	DIODE 1SS119				
D2	8-719-100-29	DIODE RD5.1EB1				
D3	8-719-106-07	DIODE RD36E-B				
D4	8-719-911-19	DIODE 1SS119				
D5	8-719-100-29	DIODE RD5.1EB1				
D6	8-719-911-19	DIODE 1SS119				
D7	8-719-911-19	DIODE 1SS119				
D8	8-719-100-31	DIODE RD5.1EB3				
D9	8-719-911-19	DIODE 1SS119				
D10	8-719-100-22	DIODE RD4.3EB1				
D11	9-982-258-00	DIODE TLS-123				
D12	8-719-911-19	DIODE 1SS119				
D13	8-719-911-19	DIODE 1SS119				
D15	8-719-911-19	DIODE 1SS119				
D16	8-719-911-19	DIODE 1SS119				
D17	8-719-911-19	DIODE 1SS119				

NOTE:

The components identified by shading and mark ⚠ are critical for safety.
Replace only with part number specified.

Les composants identifiés par une trame et une marque ⚠ sont critiques pour la sécurité. Ne les remplacer que par une pièce portant le numéro spécifié.

When indicating parts by reference number, please include the board name.

- =>: Due to standardization, interchangeable replacements may be substituted for parts specified in the diagrams.
- Items marked " ♠ " are not stocked since they are seldom required for routine service. Some delay should be anticipated when ordering these items.

- All variable and adjustable resistors have characteristic curve B, unless otherwise noted.

CAPACITORS
- MF : μF, PF : μμF

RESISTORS
- All resistors are in ohms
- F : nonflammable

COILS
- MMH : mH, UH : μH

Ref.No	Part No	Description				Remark
D18	8-719-911-19	DIODE 1SS119				
D19	8-719-911-19	DIODE 1SS119				
D20	8-719-911-19	DIODE 1SS119				
D21	8-719-911-19	DIODE 1SS119				
D22	8-719-911-19	DIODE 1SS119				
D23	8-719-911-19	DIODE 1SS119				
		IC				
IC1	9-982-051-00	IC MSL915RS				
IC2	9-982-051-00	IC MSL915RS				
IC3	9-982-051-00	IC MSL915RS				
IC4	9-982-071-00	IC MB8845-495M				
		COIL				
L1	9-982-059-00	MICRO INDUCTOR 100UH				
		TRANSISTOR				
Q1	8-764-803-00	TRANSISTOR 2SC1816-3				
Q2	8-763-314-00	TRANSISTOR 2SC1760-14				
Q3	8-763-314-00	TRANSISTOR 2SC1760-14				
Q4	8-729-853-63	TRANSISTOR 2SC536SP				
Q5	8-729-853-63	TRANSISTOR 2SC536SP				
Q6	8-729-853-63	TRANSISTOR 2SC536SP				
Q7	8-729-853-63	TRANSISTOR 2SC536SP				
Q8	8-729-853-63	TRANSISTOR 2SC536SP				
Q9	8-729-853-63	TRANSISTOR 2SC536SP				
		RESISTOR				
R1	1-246-485-00	CARBON	3.3K	5%	1/4W	
R2	1-246-449-00	CARBON	100	5%	1/4W	
R3	1-246-489-00	CARBON	4.7K	5%	1/4W	
R4	1-246-469-00	CARBON	680	5%	1/4W	
R5	1-246-473-00	CARBON	1K	5%	1/4W	
R6	1-246-453-00	CARBON	150	5%	1/4W	
R7	1-246-433-00	CARBON	22	5%	1/4W	
R8	1-246-473-00	CARBON	1K	5%	1/4W	
R9	1-246-513-00	CARBON	47K	5%	1/4W	
R10	1-246-513-00	CARBON	47K	5%	1/4W	
R11	1-246-459-00	CARBON	270	5%	1/4W	
R12	1-246-465-00	CARBON	470	5%	1/4W	
R13	1-246-521-00	CARBON	100K	5%	1/4W	
R14	1-246-521-00	CARBON	100K	5%	1/4W	
R15	1-246-482-00	CARBON	2.4K	5%	1/4W	
R16	9-982-057-00	SOLID	10M	5%	1/4W	
R17	1-246-513-00	CARBON	47K	5%	1/4W	
R18	1-246-481-00	CARBON	2.2K	5%	1/4W	
R19	1-246-451-00	CARBON	120	5%	1/4W	
R20	1-246-513-00	CARBON	47K	5%	1/4W	
R21	1-246-513-00	CARBON	47K	5%	1/4W	
R22	1-246-485-00	CARBON	3.3K	5%	1/4W	
R23	1-246-485-00	CARBON	3.3K	5%	1/4W	
R24	1-212-849-00	FUSIBLE	4.7	5%	1/4W	F

Ref.No	Part No	Description	Remark
		SWITCH	
S1	1-553-766-00	SWITCH, KEY BOARD	
S2	1-553-766-00	SWITCH, KEY BOARD	
S3	1-553-766-00	SWITCH, KEY BOARD	
S4	1-553-766-00	SWITCH, KEY BOARD	
S5	1-553-766-00	SWITCH, KEY BOARD	
S6	1-553-766-00	SWITCH, KEY BOARD	
S7	1-553-716-00	SWITCH, SLIDE	
S8	1-553-716-00	SWITCH, SLIDE	
		TRANSFORMER	
T1	9-982-073-00	TRANSFORMER, CONVERTER	
T2	9-982-074-00	TRANSFORMER, CONVERTER	

****

⚠.1-413-081-11 POWER BLOCK (SR-11A) **(Type 1)**

****

Ref.No	Part No	Description			
	⚠.1-551-964-00	CORD, POWER			
	⚠.1-561-347-00	SOCKET, AC			
		CAPACITOR			
C1	⚠.1-130-680-00	POLYPRO	0.1MF	20%	125V
C2	⚠.1-130-680-00	POLYPRO	0.1MF	20%	125V
C3	⚠.1-161-747-00	CERAMIC	0.0022MF	20%	125V
C4	⚠.1-161-747-00	CERAMIC	0.0022MF	20%	125V
C5	⚠.1-161-747-00	CERAMIC	0.0022MF	20%	125V
C6	⚠.1-123-665-00	ELECT	330MF	20%	200V
C7	⚠.1-123-580-00	ELECT	4.7MF	20%	350V
C8	⚠.1-123-580-00	ELECT	4.7MF	20%	350V
C9	⚠.1-123-336-00	ELECT	470MF	20%	25V
C10	⚠.1-106-188-00	MYLAR	0.0047MF	5%	100V
C11	⚠.1-106-180-00	MYLAR	0.0022MF	5%	100V
C12	⚠.1-106-180-00	MYLAR	0.0022MF	5%	100V
C13	⚠.9-982-264-00	POLYPRO	0.0047MF	5%	100V
C14	⚠.1-106-188-00	MYLAR	0.0047MF	5%	100V
C15	⚠.1-106-188-00	MYLAR	0.0047MF	5%	100V
C16	⚠.1-108-595-00	MYLAR	0.047MF	5%	50V
C17	⚠.9-982-187-00	ELECT	2200MF	20%	16V
C18	⚠.1-123-335-00	ELECT	330MF	20%	25V
C20	⚠.1-123-323-00	ELECT	470MF	20%	16V
C21	⚠.1-108-595-00	MYLAR	0.047MF	5%	50V
C22	⚠.9-982-188-00	ELECT	100MF	20%	16V
C23	⚠.1-108-587-00	MYLAR	0.022MF	5%	50V
C24	⚠.1-123-323-00	ELECT	470MF	20%	16V
C25	⚠.1-123-333-00	ELECT	100MF	20%	25V
C26	⚠.1-123-356-00	ELECT	10MF	20%	50V
C27	⚠.1-123-332-00	ELECT	47MF	20%	25V
C28	⚠.1-123-318-00	ELECT	33MF	20%	16V
C29	⚠.1-161-747-00	CERAMIC	0.0022MF	20%	125V
C30	⚠.1-108-579-00	MYLAR	0.01MF	5%	50V
C31	⚠.1-123-380-00	ELECT	1MF	20%	100V

NOTE:

The components identified by shading and mark ⚠ are critical for safety.
Replace only with part number specified.

Les composants identifiés par une trame et une marque ⚠ sont critiques pour la sécurité.
Ne les remplacer que par une pièce portant le numéro spécifié.

When indicating parts by reference number, please include the board name.

- =>: Due to standardization, interchangeable replacements may be substituted for parts specified in the diagrams.
- Items marked " ♠ " are not stocked since they are seldom required for routine service. Some delay should be anticipated when ordering these items.

- All variable and adjustable resistors have characteristic curve B, unless otherwise noted.

CAPACITORS
- MF : μF, PF : μμF

RESISTORS
- All resistors are in ohms
- F : nonflammable

COILS
- MMH : mH, UH : μH

POWER BLOCK

Ref.No	Part No	Description				Remark
C32	⚠ .9-982-191-00	ELECT	22MF	20%	50V	
C33	⚠ .1-123-380-00	ELECT	1MF	20%	100V	
C34	⚠ .1-102-114-00	CERAMIC	470PF	10%	50V	
C35	⚠ .1-106-180-00	MYLAR	0.0022MF	5%	100V	
C36	⚠ .1-106-180-00	MYLAR	0.0022MF	5%	100V	
C37	⚠ .1-161-747-00	CERAMIC	0.0022MF	20%	125V	

CONNECTER

Ref.No	Part No	Description
CN1	1-560-676-00	PIN, CONNECTOR 3P

DIODE

Ref.No	Part No	Description
D1	⚠ .8-719-503-40	DIODE S3V40
D2	⚠ .8-719-503-40	DIODE S3V40
D3	⚠ .8-719-503-40	DIODE S3V40
D4	⚠ .8-719-503-40	DIODE S3V40
D5	⚠ .8-719-500-01	DIODE S1WB10
D6	⚠ .8-719-550-02	DIODE S5KC20
D7	⚠ .8-719-923-48	DIODE 1S2348H
D8	⚠ .8-719-981-01	DIODE ERA81-004
D9	⚠ .8-719-100-72	DIODE RD15EB3
D10	⚠ .8-719-815-85	DIODE 1S1585
D11	⚠ .8-719-981-01	DIODE ERA81-004
D12	⚠ .8-719-815-85	DIODE 1S1585
D13	⚠ .8-719-815-85	DIODE 1S1585

FUSE

Ref.No	Part No	Description
F1	⚠ .1-532-403-XX	FUSE, 3.15A 125V

IC

Ref.No	Part No	Description
IC1	⚠ .8-759-937-59	IC MB3759
IC2	⚠ .8-759-133-90	IC UPC339C
IC3	⚠ .8-759-170-08	IC UPC78M08H

TRANSISTOR

Ref.No	Part No	Description
Q1	⚠ .8-729-925-02	TRANSISTOR 2SC2502
Q2	⚠ .8-729-925-02	TRANSISTOR 2SC2502
Q3	⚠ .8-729-663-47	TRANSISTOR 2SC1364-7
Q4	⚠ .8-729-177-23	TRANSISTOR 2SB772-P
Q5	⚠ .8-729-177-23	TRANSISTOR 2SB772-P

RESISTOR

Ref.No	Part No	Description				Remark
R1	⚠ .9-982-261-00	WIREWOUND	1	10%	5W	F
R2	⚠ .1-244-929-00	CARBON	220K	5%	1/2W	
R3	⚠ .1-202-727-00	SOLID	4.7M	10%	1/2W	
R4	⚠ .1-246-441-00	CARBON	47	5%	1/4W	
R5	⚠ .1-246-441-00	CARBON	47	5%	1/4W	
R6	⚠ .1-246-483-00	CARBON	2.7K	5%	1/4W	
R7	⚠ .1-244-841-00	CARBON	47	5%	1/2W	
R8	⚠ .1-244-835-00	CARBON	27	5%	1/2W	
R9	⚠ .1-217-596-00	METAL PLATE	0.05	10%	2W	
R10	⚠ .1-246-491-00	CARBON	5.6K	5%	1/4W	
R11	⚠ .1-246-529-00	CARBON	220K	5%	1/4W	

Ref.No	Part No	Description				Remar
R12	⚠ .1-246-535-00	CARBON	390K	5%	1/4W	
R13	⚠ .1-246-491-00	CARBON	5.6K	5%	1/4W	
R14	⚠ .1-246-511-00	CARBON	39K	5%	1/4W	
R15	⚠ .1-246-493-00	CARBON	6.8K	5%	1/4W	
R16	⚠ .1-246-483-00	CARBON	2.7K	5%	1/4W	
R17	⚠ .1-246-489-00	CARBON	4.7K	5%	1/4W	
R18	⚠ .1-246-487-00	CARBON	3.9K	5%	1/4W	
R19	⚠ .1-246-481-00	CARBON	2.2K	5%	1/4W	
R20	⚠ .1-246-491-00	CARBON	5.6K	5%	1/4W	
R21	⚠ .1-246-521-00	CARBON	100K	5%	1/4W	
R22	⚠ .1-246-497-00	CARBON	10K	5%	1/4W	
R24	⚠ .1-246-473-00	CARBON	1K	5%	1/4W	
R25	⚠ .1-246-489-00	CARBON	4.7K	5%	1/4W	
R26	⚠ .1-246-491-00	CARBON	5.6K	5%	1/4W	
R27	⚠ .1-244-853-00	CARBON	150	5%	1/2W	
R28	⚠ .1-246-501-00	CARBON	15K	5%	1/4W	
R29	⚠ .1-246-497-00	CARBON	10K	5%	1/4W	
R30	⚠ .1-246-469-00	CARBON	680	5%	1/4W	
R31	⚠ .1-246-481-00	CARBON	2.2K	5%	1/4W	
R32	⚠ .1-246-477-00	CARBON	1.5K	5%	1/4W	
R33	⚠ .1-246-401-00	CARBON	1	5%	1/4W	
R34	⚠ .1-246-401-00	CARBON	1	5%	1/4W	
R35	⚠ .1-246-497-00	CARBON	10K	5%	1/4W	
R36	⚠ .1-246-497-00	CARBON	10K	5%	1/4W	
R37	⚠ .1-246-481-00	CARBON	2.2K	5%	1/4W	
R38	⚠ .1-246-473-00	CARBON	1K	5%	1/4W	
R39	⚠ .1-246-497-00	CARBON	10K	5%	1/4W	
R40	⚠ .9-982-262-00	FUSIBLE	3.3	5%	1/2W	F
R41	⚠ .9-982-185-00	METAL PLATE	1	10%	2W	
R42	⚠ .9-982-263-00	FUSIBLE	2.2	5%	1/4W	F
R43	⚠ .1-246-497-00	CARBON	10K	5%	1/4W	
R44	⚠ .1-244-835-00	CARBON	27	5%	1/2W	
R45	⚠ .1-244-849-00	CARBON	100	5%	1/2W	

VARIABLE RESISTOR

Ref.No	Part No	Description
RV1	⚠ .1-226-707-00	SOLID 1K
RV2	⚠ .1-226-707-00	SOLID 1K
RV3	⚠ .1-226-770-00	METAL GLAZE 470

RELAY

Ref.No	Part No	Description
RL1	⚠ .9-982-184-00	RELAY MR31-12U

TRANSFOMER

Ref.No	Part No	Description
T1	⚠ .1-421-439-00	CHOKE COIL, NORMAL
T2	⚠ .1-421-439-00	CHOKE COIL, NORMAL
T3	⚠ .1-421-438-00	CHOKE COIL, COMMON
T4	⚠ .1-413-073-00	TRANSFORMER, SWITCHING
T5	⚠ .1-437-097-00	TRANSFORMER, DRIVE
T6	⚠ .1-447-197-00	TRANSFORMER, AC
T7	⚠ .9-982-193-00	CHOKE COIL (C)
T8	⚠ .9-982-194-00	CHOKE CIOL, POWER
T9	⚠ .9-982-195-00	CHOKE COIL (A)
T10	⚠ .9-982-196-00	CHOKE COIL (B)

NOTE:

The components identified by shading and mark ⚠ are critical for safety. Replace only with part number specified.

Les composants identifiés par une trame et une marque ⚠ sont critiques pour la sécurité. Ne les remplacer que par une pièce portant le numéro spécifié.

When indicating parts by reference number, please include the board name.

- =>: Due to standardization, interchangeable replacements may be substituted for parts specified in the diagrams.
- Items marked " ♠ " are not stocked since they are seldom required for routine service. Some delay should be anticipated when ordering these items.

- All variable and adjustable resistors have characteristic curve B, unless otherwise noted.

CAPACITORS
- MF : μF, PF : μμF

RESISTORS
- All resistors are in ohms
- F : nonflammable

COILS
- MMH : mH, UH : μH

POWER BLOCK

Ref.No.	Part No.	Description			Remark
T11	⚠.9-982-196-00	CHOKE COIL (B)			
T12	⚠.9-982-194-00	CHOKE COIL, POWER			

****

Ref.No.	Part No.	Description			Remark
	⚠.1-413-116-11	POWER BLOCK (SR-11PH) **(Type 2)**			
	⚠.1-555-312-21	CORD, POWER			

CAPACITOR

Ref.No.	Part No.	Description			Remark
C1	⚠.1-123-352-11	ELECT	1MF	20%	50V
C2	⚠.1-130-939-11	FILM	0.22MF	20%	300V
C3	⚠.1-161-742-11	CERAMIC	0.0022MF	20%	400V
C4	⚠.1-161-742-11	CERAMIC	0.0022MF	20%	400V
C5	⚠.1-161-742-11	CERAMIC	0.0022MF	20%	400V
C6	⚠.1-161-742-11	CERAMIC	0.0022MF	20%	400V
C7	⚠.1-125-314-11	ELECT	200MF	20%	400V
C8	⚠.1-124-167-11	ELECT	4.7MF	20%	250V
C9	⚠.1-124-167-11	ELECT	4.7MF	20%	250V
C10	⚠.1-123-362-11	ELECT	330MF	20%	50V
C11	⚠.1-108-234-51	FILM	0.0047MF	10%	50V
C12	⚠.1-123-332-11	ELECT	47MF	20%	25V
C13	⚠.1-108-800-61	FILM	0.0047MF	5%	100V
C14	⚠.1-106-369-51	FILM	0.0022MF	5%	100V
C15	⚠.1-106-369-51	FILM	0.0022MF	5%	100V
C16	⚠.1-106-369-51	FILM	0.0022MF	5%	100V
C17	⚠.1-108-251-51	FILM	0.1MF	10%	50V
C18	⚠.1-123-325-11	ELECT	2200MF	20%	16V
C19	⚠.1-123-323-11	ELECT	470MF	20%	16V
C20	⚠.1-108-234-51	FILM	0.0047MF	10%	50V
C21	⚠.1-108-800-51	FILM	0.0047MF	5%	100V
C22	⚠.1-108-234-51	FILM	0.0047MF	10%	50V
C23	⚠.1-108-246-51	FILM	0.047MF	10%	50V
C24	⚠.1-123-323-11	ELECT	470MF	20%	16V
C25	⚠.1-123-323-11	ELECT	470MF	20%	16V
C26	⚠.1-123-332-11	ELECT	47MF	20%	25V
C27	⚠.1-123-316-11	ELECT	10MF	20%	16V
C28	⚠.1-123-320-11	ELECT	100MF	20%	16V
C29	⚠.1-123-354-11	ELECT	3.3MF	20%	50V
C30	⚠.1-106-377-51	FILM	0.01MF	5%	50V
C31	⚠.1-123-356-11	ELECT	10MF	20%	50V
C32	⚠.1-161-742-11	CERAMIC	0.0022MF	20%	400V
C33	⚠.1-123-335-11	ELECT	330MF	20%	25V

CONNECTOR

Ref.No.	Part No.	Description			Remark
CN1	1-560-676-11	PIN, CONNECTOR 3P			

DIODE

Ref.No.	Part No.	Description			Remark
D1	⚠.8-719-504-40	DIODE	S4VB40		
D2	⚠.8-719-511-10	DIODE	S1WB10		
D3	⚠.8-719-550-02	DIODE	S5KC20		
D4	⚠.8-719-104-01	DIODE	F114E		
D5	⚠.8-719-104-01	DIODE	F114E		
D6	⚠.8-719-920-01	DIODE	ERB12-01		
D7	⚠.8-719-981-01	DIODE	ERA81-004		
D8	⚠.8-719-923-48	DIODE	1S2348H		
D9	⚠.8-719-100-72	DIODE	RD15E-B3		
D10	⚠.8-719-925-76	DIODE	1S2076		
D11	⚠.8-719-923-48	DIODE	1S2348		
D12	⚠.8-719-100-56	DIODE	RD10E-B1		

FUSE

Ref.No.	Part No.	Description			Remark
F1	⚠.1-532-237-11	FUSE	3.15A	125V	

IC

Ref.No.	Part No.	Description			Remark
IC1	⚠.8-759-937-59	IC	MB3759		
IC2	⚠.8-759-375-08	IC	HA178M08P		

TRANSISTOR

Ref.No.	Part No.	Description			Remark
Q1	⚠.8-729-925-02	TRANSISTOR	2SC2502		
Q2	⚠.8-729-925-02	TRANSISTOR	2SC2502		
Q3	⚠.8-729-173-47	TRANSISTOR	2SA733		
Q4	⚠.8-729-194-57	TRANSISTOR	2SC945		
Q5	⚠.8-729-188-23	TRANSISTOR	2SD882		
Q6	⚠.8-729-194-57	TRANSISTOR	2SC945		
Q7	⚠.8-729-194-57	TRANSISTOR	2SC945		
Q8	⚠.8-729-157-13	TRANSISTOR	2SD571		

RESISTOR

Ref.No.	Part No.	Description			Remark
R1	⚠.1-202-727-11	SOLID	4.7M	10%	1/2W
R2	⚠.1-217-616-11	WIREWOUND	3.3	5%	5W
R3	⚠.1-246-489-46	CARBON	4.7k	5%	1/6W
R4	⚠.1-246-493-15	CARBON	6.8k	5%	1/4W
R5	⚠.1-246-429-15	CARBON	15	5%	1/4W
R6	⚠.1-246-429-15	CARBON	15	5%	1/4W
R7	⚠.1-246-483-15	CARBON	2.7k	5%	1/4W
R8	⚠.1-244-841-11	CARBON	47	5%	1/2W
R9	⚠.1-246-493-46	CARBON	6.8k	5%	1/6W
R10	⚠.1-246-489-46	CARBON	4.7k	5%	1/6W
R11	⚠.1-246-483-46	CARBON	2.7k	5%	1/6W
R12	⚠.1-246-529-46	CARBON	220k	5%	1/6W
R13	⚠.1-246-491-15	CARBON	5.6k	5%	1/4W
R14	⚠.1-246-529-15	CARBON	220k	5%	1/4W
R15	⚠.1-212-375-61	METAL PLATE	18	5%	1W
R16	⚠.1-212-375-61	METAL PLATE	18	5%	1W
R17	⚠.1-217-596-51	METAL PLATE	0.05	5%	2W
R18	⚠.1-217-428-21	FUSIBLE	3.3	5%	1/2W
R19	⚠.1-246-491-15	CARBON	5.6k	5%	1/4W
R20	⚠.1-217-633-11	METAL PLATE	0.56	5%	2W
R21	⚠.1-246-509-15	CARBON	33k	5%	1/4W
R22	⚠.1-246-487-15	CARBON	3.9k	5%	1/4W
R23	⚠.1-246-481-15	CARBON	2.2k	5%	1/4W
R24	⚠.1-246-497-46	CARBON	10k	5%	1/6W
R25	⚠.1-246-491-46	CARBON	5.6k	5%	1/6W

NOTE:

The components identified by shading and mark ⚠ are critical for safety. Replace only with part number specified.

Les composants identifiés par une trame et une marque ⚠ sont critiques pour la sécurité. Ne les remplacer que par une pièce portant le numéro spécifié.

When indicating parts by reference number, please include the board name.

- =>: Due to standardization, interchangeable replacements may be substituted for parts specified in the diagrams.
- Items marked " ♠ " are not stocked since they are seldom required for routine service. Some delay should be anticipated when ordering these items.

- All variable and adjustable resistors have characteristic curve B, unless otherwise noted.

CAPACITORS
- MF : μF, PF : μμF

RESISTORS
- All resistors are in ohms
- F : nonflammable

COILS
- MMH : mH, UH : μH

POWER BLOCK

Ref.No.	Part No.	Description			Remark
R26	⚠.1-246-487-46	CARBON	3.9k	5%	1/6W
R27	⚠.1-246-027-032	CARBON	2.2k	5%	1/6W
R28	⚠.1-246-477-46	CARBON	1.5k	5%	1/6W
R29	⚠.1-246-465-46	CARBON	470	5%	1/6W
R30	⚠.1-246-465-46	CARBON	470	5%	1/6W
R31	⚠.1-246-443-46	CARBON	56	5%	1/6W
R32	⚠.1-246-481-46	CARBON	2.2k	5%	1/6W
R33	⚠.1-246-473-46	CARBON	1k	5%	1/6W
R34	⚠.1-244-849-11	CARBON	100	5%	1/2W
R35	⚠.1-246-449-46	CARBON	100	5%	1/6W
		VARIABLE RESISTOR			
RV1	⚠.1-226-707-11		1k		
RV2	⚠.1-226-707-11		1k		
RV3	⚠.1-228-836-11		330		
		RELAY			
RL1	⚠.1-515-215-11	RELAY	MR31-12		
		TRANSFORMER			
T1	⚠.9-982-196-01	CHOKE COIL (B)			
T2	⚠.9-982-194-01	CHOKE COIL, POWER			
T3	⚠.1-421-438-11	CHOKE COIL COMMON			
T4	⚠.1-447-394-11	TRANSFORMER, SWITCHING			
T5	⚠.1-437-121-11	TRANSFORMER, DRIVE			
T6	⚠.1-446-932-11	TRANSFORMER, AC			
T7	⚠.1-408-762-11	CHOKE COIL (C)			
T8	⚠.9-982-194-01	CHOKE COIL, POWER			
T9	⚠.1-408-723-11	CHOKE COIL (B)			
T10	⚠.9-982-194-01	CHOKE COIL (B)			
		SPARK GAP			
SG1	⚠.1-519-272-11	SPARK GAP			
SG2	⚠.1-519-272-11	SPARK GAP			
		MISCELLANEOUS			
	A-6761-043-A	ACE ASSY (M-2)			

* * *

ACCESSORIES AND PACKING MATERIALS

Ref.No.	Part No.	Description	Remark
	A-6701-177-A	COMMANDER ASSY	
	1-417-063-00	TRANSFORMER, ANTENNA (EAC-24)	
	1-513-379-00	CONVERTER (EAC-25)	
	1-551-139-00	CORD, CONNECTION	
	1-551-644-41	CORD, CONNECTION	
	3-660-986-00	SHEET, PROTECTION	
	3-671-402-00	INDICATOR, ACCESSORY	
	3-671-832-00	BAG, PROTECTION	
	3-671-873-00	CASE, ACCESSORY	
	3-674-305-00	CUSHION (LOWER FRONT)	
	3-674-306-00	CUSHION (LOWER REAR)	
	3-674-307-00	CUSHION (UPPER FRONT)	
	3-674-308-00	CUSHION (UPPER REAR)	
	3-674-309-00	INDIVIDUAL CARTON (TYPE 1)	
	3-674-317-00	LID, ACCESSORY CASE	
	3-675-585-01	INDIVIDUAL CARTON (TYPE 2)	
	3-703-338-01	LABEL, UL (570F)	
	3-783-869-21	MANUAL, INSTRUCTION	
	3-783-869-31	MANUAL, INSTRUCTION (CANADIAN MODEL	
	3-795-338-21	MANUAL, INSTRUCTION	
	3-795-338-31	MANUAL, INSTRUCTION (CANADIAN MODEL	
	3-783-869-51	MANUAL, INSTRUCTION (TYPE 1 (EXCEPT THE U.S.A., CANADA), TYPE 2)	
	3-795-338-51	MANUAL, INSTRUCTION (TYPE 1 (EXCEPT THE U.S.A., CANADA), TYPE	
	4-491-302-31	CARD, WARRANTY (CANADIAN MODEL)	
	4-491-335-21	CARD, WARRANTY (U.S.A.)	
	4-491-336-21	REGISTRATION (U.S.A.)	

……

NOTE:

The components identified by shading and mark ⚠ are critical for safety.
Replace only with part number specified.

Les composants identifiés par une trame et une marque ⚠ sont critiques pour la sécurité.
Ne les remplacer que par une pièce portant le numéro spécifié.

When indicating parts by reference number, please include the board name.

- =>: Due to standardization, interchangeable replacements may be substituted for parts specified in the diagrams.
- Items marked " 🌢 " are not stocked since they are seldom required for routine service. Some delay should be anticipated when ordering these items.

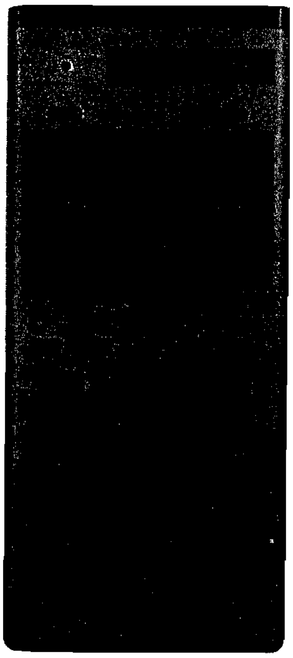
- All variable and adjustable resistors have characteristic curve B, unless otherwise noted.

CAPACITORS
- MF : μF, PF : μμF

RESISTORS
- All resistors are in ohms
- F : nonflammable

COILS
- MMH : mH, UH : μH

RMT-312

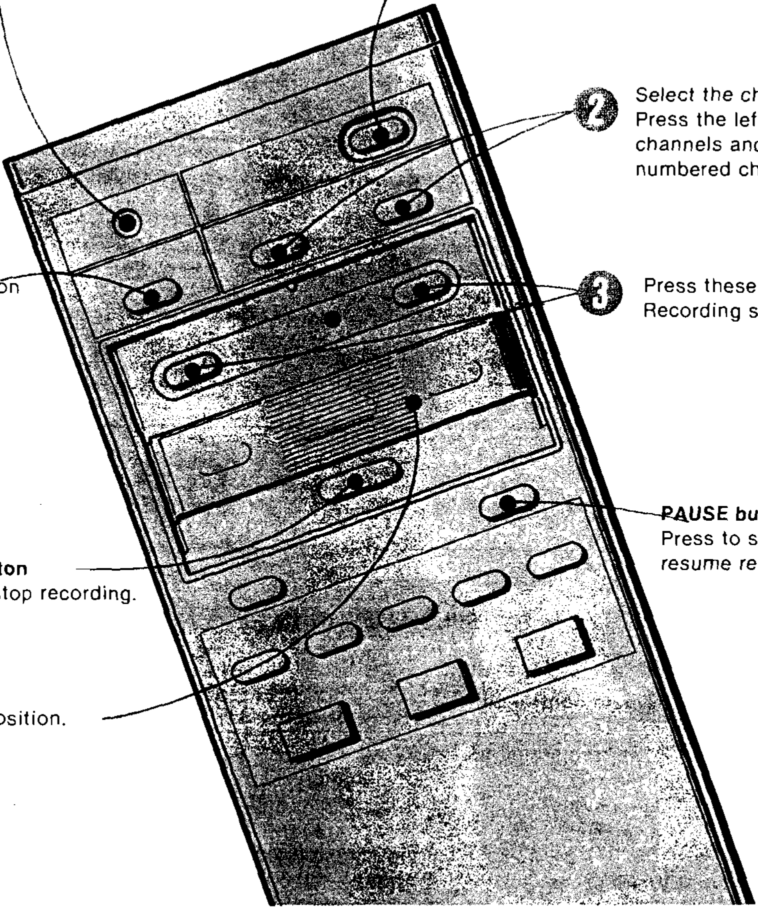


REMOTE CONTROL UNIT

SPECIFICATIONS

Remote control unit

Remote control system	Infrared control
Power requirements	3V dc, 2 size AA batteries (IEC designation R6)
Dimensions	Approx. 65 × 150 × 18 mm (w/h/d) (2⁵/8 × 6 × ³/4 inches) incl. projecting parts and controls
Weight	Approx. 140 g (5 oz) incl. batteries



Remote function indicator
Lights up when any of the buttons on the remote control unit are pressed.

POWER switch
Press to turn the power on. (To turn it off, press again.)

② Select the channel
Press the left button for lower-numbered channels and the right button for higher-numbered channels.

VTR button
Functions in the same way as the PROGRAM SELECT button on the recorder.
The ON-VTR lamp will indicate the selected mode.

③ Press these two buttons simultaneously.
Recording starts.

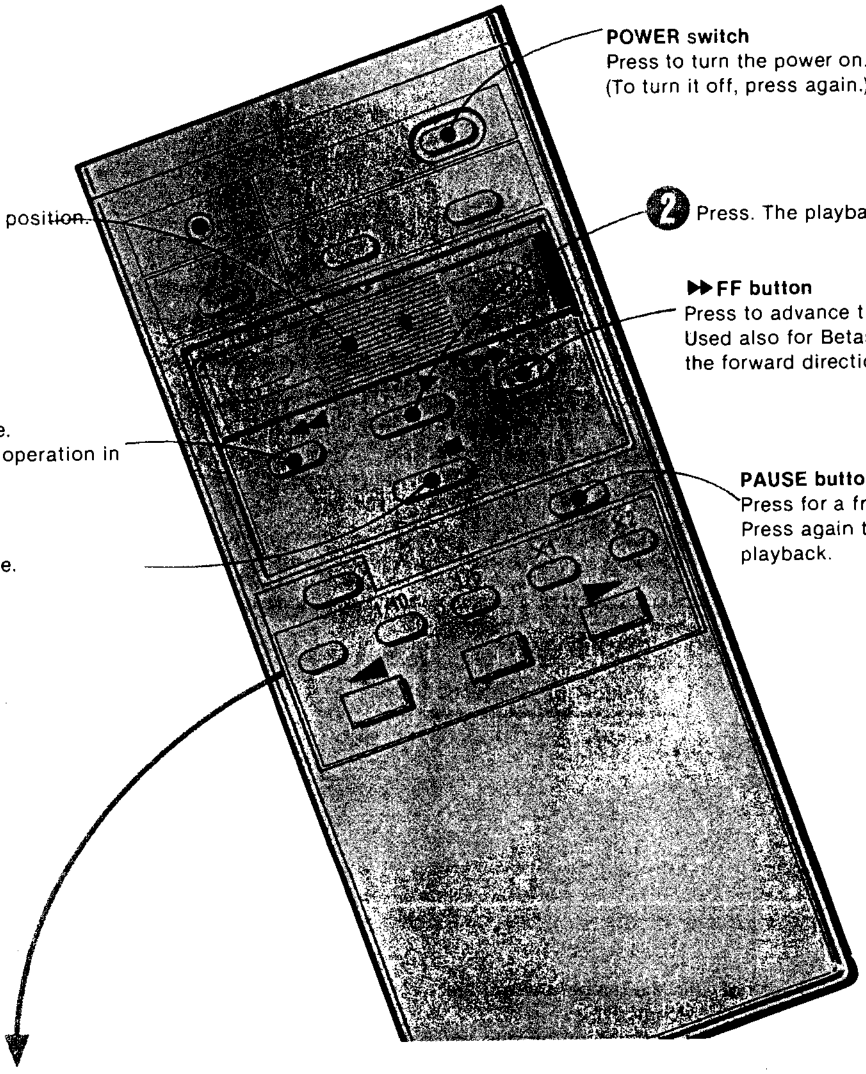
PAUSE button
Press to stop the tape momentarily. To resume recording, press again.

STOP button
Press to stop recording.

① Slide the cover to this position.

- The unused channels can be skipped during channel selection with the remote control unit if you have cleared the memory of these channels as described in "Clearing unused channels" on page 9 of the accompaning "SET-UP GUIDE".
- Recording will start immediately when the RECORD buttons on the remote control unit are pressed, even if a camera is connected to the recorder.

Playback
The buttons on the remote control unit perform the same function as the corresponding buttons on the video recorder.



POWER switch
Press to turn the power on.
(To turn it off, press again.)

❶ Slide the cover to this position.

❷ Press. The playback begins.

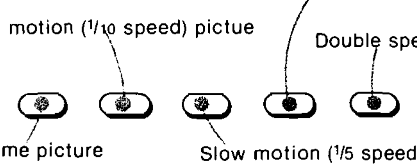
▶▶FF button
Press to advance the tape rapidly.
Used also for Betascan operation in the forward direction.

REW ◀◀ button
Press to rewind the tape.
Used also for Betascan operation in the reverse direction.

PAUSE button
Press for a freeze picture.
Press again to resume normal speed playback.

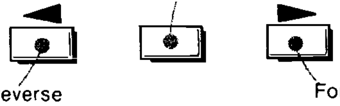
❸ Press to stop the tape.

To see the playback picture at various speeds
❶ Press the SWING SEARCH button during playback.
❷ Select the playback speed.



Normal speed picture
Slow motion ($^1/_{10}$ speed) pictue
Double speed picture
Frame-by-frame picture
Slow motion ($^1/_5$ speed) picture

❸ Select the playback direction.



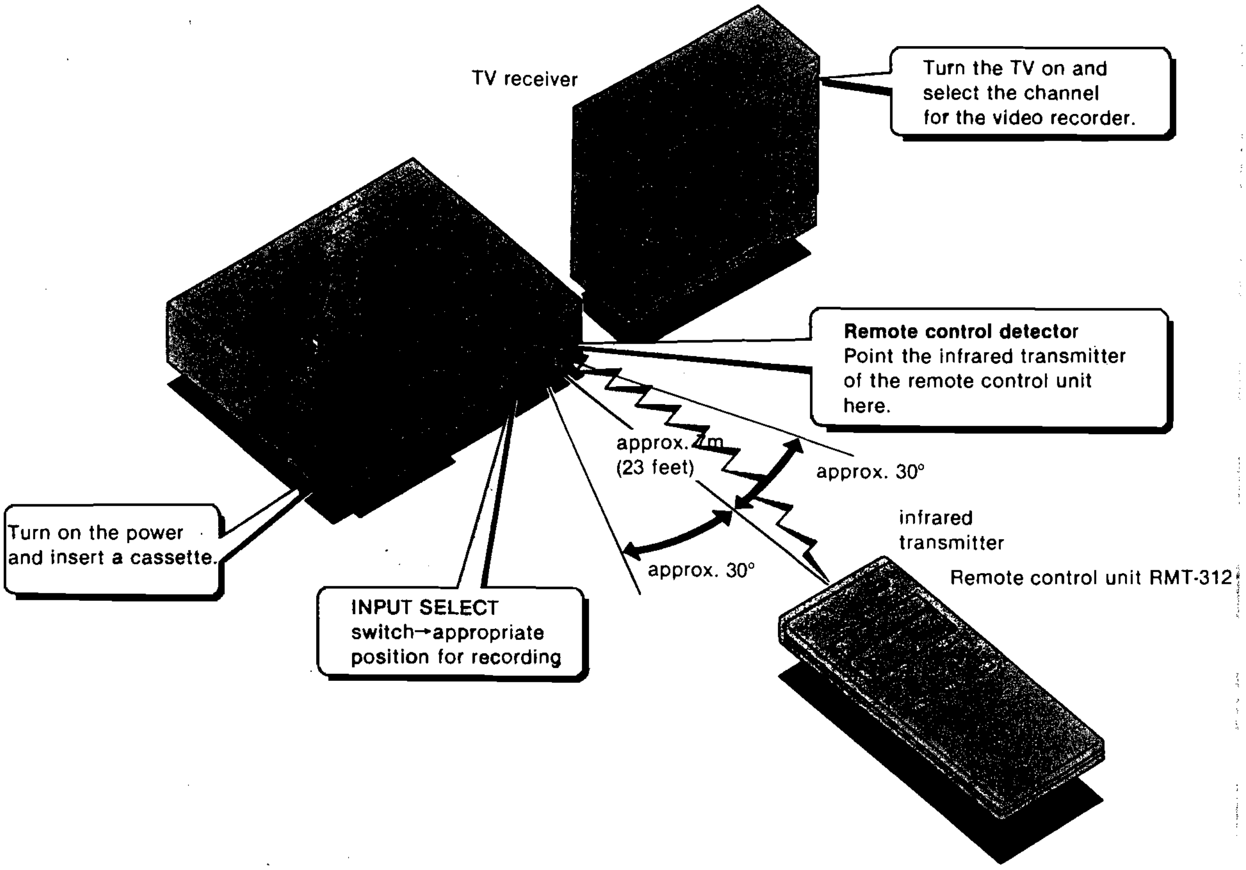
For freeze picture
For reverse
For forward

- For frame-by-frame playback, press and release the ◀ or ▶ button reepeatedly. Keep the button depressed for continous frame-by-frame playback.
- Back and forth playback is also possible in the same way as with the buttons on the recorder.

To resume normal playback, press the PLAY ▶ button.

HOW TO USE THE REMOTE CONTROL UNIT

Preparation


TV receiver
approx. 7m
(23 feet)
approx. 30°
approx. 30°
infrared
transmitter
Remote control unit RMT-312

Turn the TV on and select the channel for the video recorder.

Remote control detector
Point the infrared transmitter of the remote control unit here.

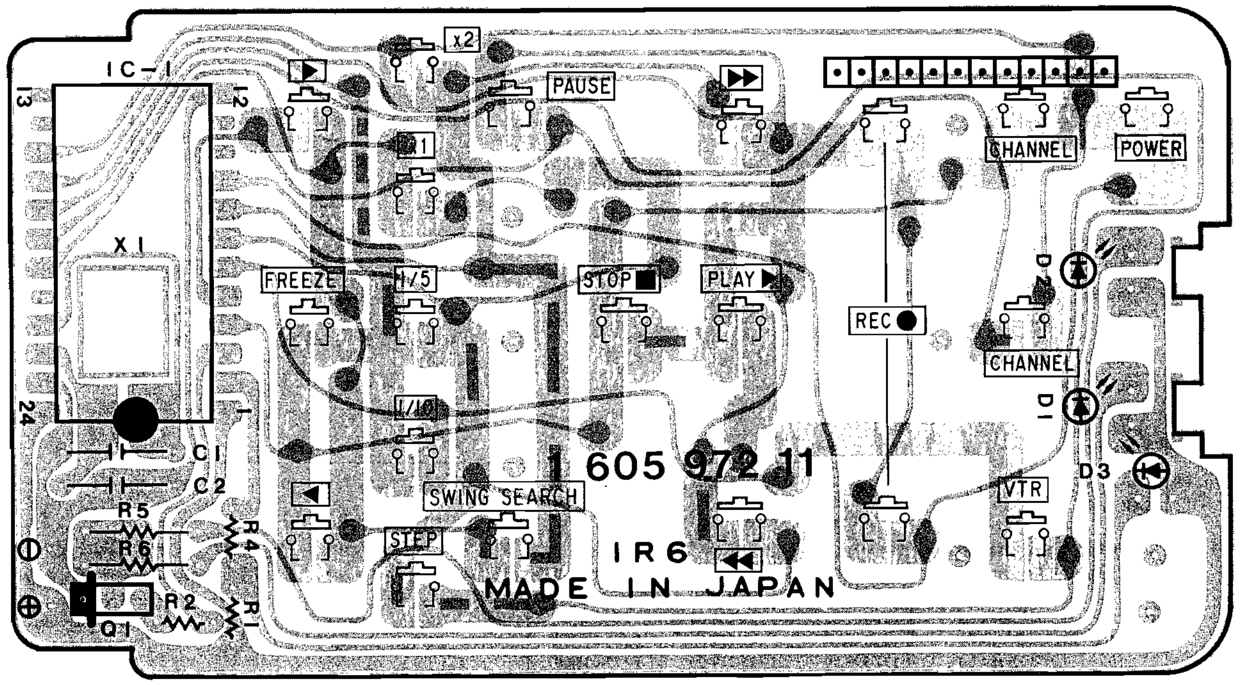
Turn on the power and insert a cassette.

INPUT SELECT switch→appropriate position for recording

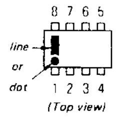
Notes

- There should be no obstacles between the remote control unit and the remote control detector of the recorder.
- The shorter the distance between the remote control unit and the recorder, the wider the angle within which the recorder can be controlled.

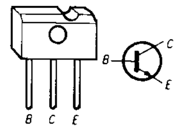
3. MOUNTING DIAGRAM


IC-1
13
12
24
X1
C1
C2
R5
R6
R4
R2
R1
Q1
⊖
⊕
x2
PAUSE
1
CHANNEL
POWER
FREEZE
1/5
STOP ■
PLAY ▶
REC ●
CHANNEL
D2
D1
D3
1/10
1 605 972 11
SWING SEARCH
STEP
IR6
MADE IN JAPAN
VTR

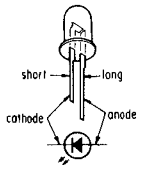
CX-786


8 7 6 5
line
or
dot
1 2 3 4
(Top view)

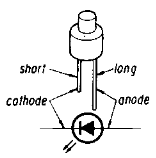
2SC2673



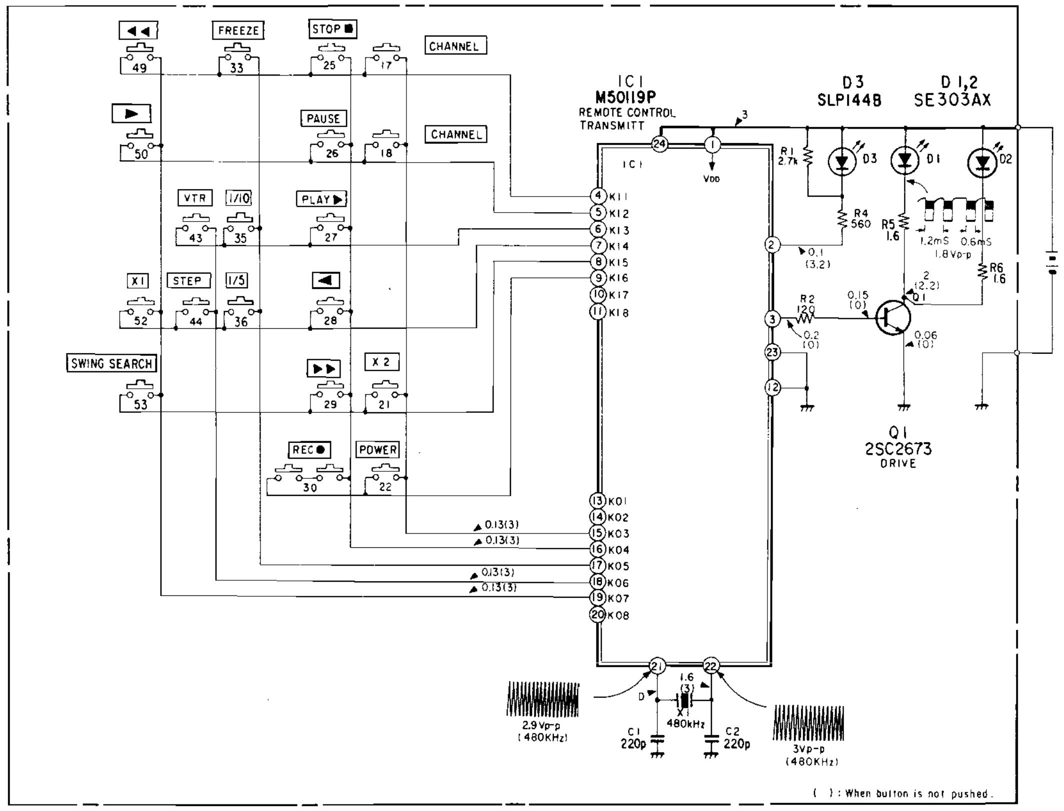
SE303AX


short
long
cathode
anode

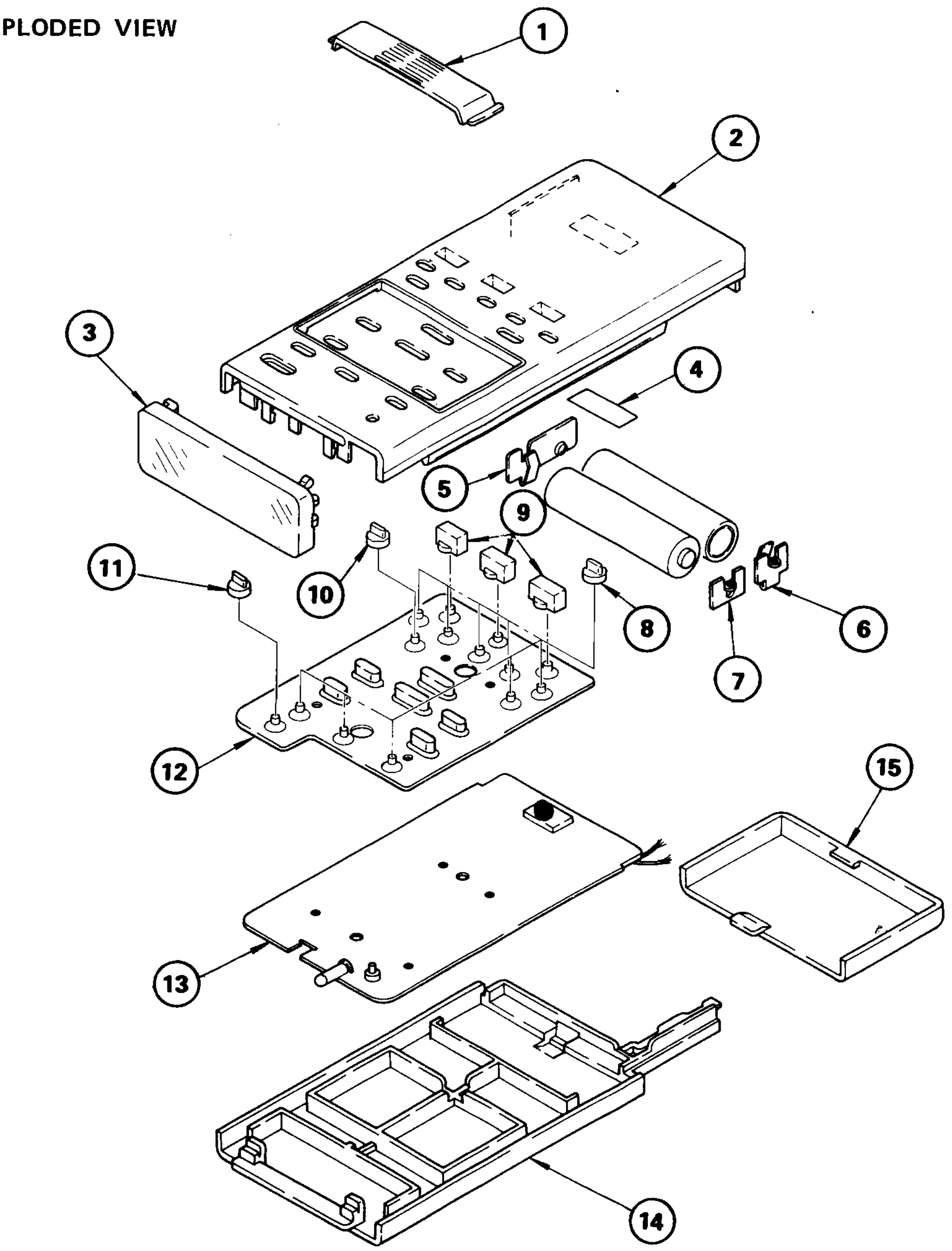
SLP144B


short
long
cathode
anode

4. SCHEMATIC DIAGRAM


◀◀
49
FREEZE
33
STOP ■
25
17
CHANNEL
▶
50
PAUSE
26
18
CHANNEL
VTR
43
1/10
35
PLAY ▶
27
X1
52
STEP
44
1/5
36
◀
28
SWING SEARCH
53
▶▶
29
X2
21
REC ●
30
POWER
22
IC1
M50119P
REMOTE CONTROL
TRANSMITT
VDD
K11
K12
K13
K14
K15
K16
K17
K18
K01
K02
K03
K04
K05
K06
K07
K08
0.13(3)
0.13(3)
0.13(3)
0.13(3)
D3
SLP144B
D1,2
SE303AX
R1 2.7k
R4 560
R5 1.6
1.2mS 0.6mS
1.8Vp-p
R2 120
R6 1.6
0.1 (3.2)
0.15 (0)
0.2 (0)
2 (2.2)
0.06 (0)
Q1
2SC2673
DRIVE
3V DC
UM3 x 2
2.9Vp-p (480KHz)
C1 220p
X1 480kHz
C2 220p
3Vp-p (480KHz)
( ) : When button is not pushed.

5. EXPLODED VIEW


1
2
3
4
5
6
7
8
9
10
11
12
13
14
15

No.	Part No	Description	Remark
1	2-290-603-00	CURSOR	
2	X-3670-033-2	CASE (D) ASSY, UPPER	
3	2-290-608-00	PLATE, FROSTED	
4	♠ :3-703-159-00	LABEL, DESTINATION	
5	4-350-925-00	TERMINAL (C), BATTERY	
6	2-290-601-00	TERMINAL (A), BATTERY	
7	2-290-602-00	TERMINAL (B), BATTERY	
8	2-294-403-00	PUSH BUTTON (S)	

No.	Part No	Description	Remark
9	2-290-604-11	PUSH BUTTON	
10	2-294-403-11	PUSH BUTTON (S)	
11	2-294-401-00	BUTTON (S), POWER	
12	3-671-806-00	SHEET (D), RUBBER	
13	♠ :1-605-972-12	IR-6 BOARD	
14	2-290-611-00	CASE, LOWER	
15	2-290-606-00	COVER, BATTERY	

The components identified by shading and mark ⚠ are critical for safety. Replace only with part number specified.

Les composants identifiés par une trame et une marque ⚠ sont critiques pour la sécurité. Ne les remplacer que par une pièce portant le numéro spécifié.

NOTE:
- Items with no part number and no description are not stocked because they are seldom required for routine service.
- The construction parts of an assembled part are indicated with a collation number in the remark column.
- As to the part numbered with E-, refer to the electrical parts list.
- Items marked " ♠ " are not stocked since they are seldom required for routine service. Some delay should be anticipated when ordering these items.

6. ELECTRICAL PARTS LIST

```
RM
 Ref.No Part No       Description                         Remark

      ●:1-605-972-12  IR-6 BOARD
                      **********

        2-290-601-00  TERMINAL (A), BATTERY
        2-290-602-00  TERMINAL (B), BATTERY

                   CAPACITOR

 C001   1-161-315-00  CERAMIC       220PF        10%     50V
 C002   1-161-315-00  CERAMIC       220PF        10%     50V

                   DIODE

 D001   8-719-193-03  DIODE SE303AX
 D002 =>8-719-193-03  DIODE SE303AX
 D003   8-719-901-44  DIODE SLP144B

                   IC

 IC001=>8-759-907-86  IC CX-786

                   TRANSISTOR

 Q001   8-729-967-32  TRANSISTOR 2SC2673

                   RESISTOR

 R001   1-246-788-00  CARBON        2.7K          1/8W
 R002   1-246-772-00  CARBON        120           1/8W
 R004   1-246-780-00  CARBON        560           1/8W
 R005   1-246-406-00  CARBON        1.6     5%    1/4W
 R006   1-246-406-00  CARBON        1.6     5%    1/4W

                   CRYSTAL

 X001   1-527-476-00  OSCILLATOR, CERAMIC
****************************************************************

               ACCESSORIES AND PACKING MATERIALS
               *********************************

        Part.No       Description                         Remark

        3-701-622-00  BAG, POLYETHYLENE
```

NOTE:

The components identified by shading and mark ⚠ are critical for safety.
Replace only with part number specified.

Les composants identifiés par une trame et une marque ⚠ sont critiques pour la sécurité.
Ne les remplacer que par une pièce portant le numéro spécifié.

When indicating parts by reference number, please include the board name.

- =>: Due to standardization, interchangeable replacements may be substituted for parts specified in the diagrams.
- Items marked " ● " are not stocked since they are seldom required for routine service. Some delay should be anticipated when ordering these items.

- All variable and adjustable resistors have characteristic curve B, unless otherwise noted.

CAPACITORS
- MF : μF, PF : μμF

RESISTORS
- All resistors are in ohms
- F : nonflammable

COILS
- MMH : mH, UH : μH

STANDARD PARTS LIST

ELECTROLYTIC CAPACITORS

RATING → : Use the high voltage rated one.

CAP. (μF)	6.3 VOLT.	10 VOLT.	16 VOLT.	25 VOLT.	35 VOLT.	50 VOLT.	63 VOLT.
	PART No.	PART No.	PART No.	PART No.	PART No.	PART No.	PART No.
0.47						→	→
1.0						→	→
2.2						→	→
3.3						→	→
4.7				→	→	→	1-123-369-00
10			→	→	→	1-123-356-00	1-123-370-00
22			→	1-123-330-00	→	1-123-357-00	1-123-371-00
33	→	→	1-123-318-00	→	1-123-343-00	→	1-123-372-00
47	→	1-123-306-00	→	1-123-332-00	→	1-123-359-00	1-123-373-00
100	→	1-123-307-00	→	1-123-333-00	1-123-345-00	1-123-360-00	1-123-374-00
220	→	1-123-308-00	1-123-321-00	1-123-334-00	1-123-346-00	1-123-361-00	1-123-375-00
330	→	1-123-309-00	1-123-322-00	1-123-335-00	1-123-347-00	1-123-362-00	1-123-376-00
470	1-123-298-00	1-123-310-00	1-123-323-00	1-123-336-00	1-123-348-00	1-123-363-00	1-123-377-00
1000	1-123-299-00	1-123-311-00	1-123-324-00	1-123-337-00	1-123-349-00	1-123-364-00	1-123-378-00
2200	1-123-300-00	→	1-123-325-00	1-123-338-00	1-123-350-00		
3300	1-123-301-00	1-123-313-00	1-123-326-00	1-123-339-00			
4700	1-123-302-00	1-123-314-00	1-123-327-00				
6800	1-123-303-00	1-123-315-00					
10000	1-123-304-00						

CAP. (μF)	100 VOLT.	160 VOLT.	250 VOLT.	350 VOLT.
	PART No.	PART No.	PART No.	PART No.
0.47	1-123-379-00			
1.0	1-123-380-00	1-123-252-00	1-123-003-00	1-121-168-00
2.2	1-123-381-00	1-123-026-00	1-123-027-00	1-123-028-00
3.3	1-123-382-00	1-121-707-00	1-123-004-00	1-123-006-00
4.7	1-123-383-00	1-121-246-00	1-121-759-00	1-123-007-00
10	1-123-384-00	1-121-999-00	1-123-254-00	1-123-008-00
22	1-123-385-00	1-123-253-00	1-123-005-00	1-123-022-00
33	1-123-386-00	1-121-757-00		
47	1-123-387-00	1-121-919-00		
100	1-123-388-00			
220	1-123-389-00			
330	1-123-390-00			
470	1-123-391-00			

CERAMIC CAPACITORS

RATING

CAP. (pF)	50 VOLT.	CAP. (pF)	50 VOLT.	CAP. (pF)	50 VOLT.	CAP. (μF)	50 VOLT.
	PART No.		PART No.		PART No.		PART No.
0.5	1-101-837-00	22	1-102-959-00	150	1-101-361-00	0.001	1-102-074-00
0.75	1-101-586-00	24	1-102-960-00	160	1-101-367-00	0.0012	1-102-118-00
1.0	1-102-934-00	27	1-102-961-00	180	1-102-976-00	0.0015	1-102-119-00
1.5	1-101-576-00	30	1-102-962-00	200	1-102-977-00	0.0018	1-102-120-00
2.0	1-102-935-00	33	1-102-963-00	220	1-102-978-00	0.0022	1-102-121-00
3	1-102-936-00	36	1-102-964-00	240	1-102-979-00	0.0027	1-102-122-00
4	1-102-937-00	39	1-102-965-00	270	1-102-980-00	0.0033	1-102-123-00
5	1-102-942-00	43	1-102-966-00	300	1-102-981-00	0.0039	1-102-124-00
6	1-102-943-00	47	1-101-880-00	330	1-102-820-00	0.0047	1-102-125-00
7	1-102-944-00	51	1-101-882-00	360	1-102-821-00	0.0056	1-102-126-00
8	1-102-945-00	56	1-101-884-00	390	1-102-822-00	0.0068	1-102-127-00
9	1-102-946-00	62	1-101-886-00	430	1-102-823-00	0.0082	1-102-128-00
10	1-102-947-00	68	1-101-888-00	470	1-102-824-00	0.01	1-102-129-00
11	1-102-948-00	75	1-101-890-00	510	1-101-059-00	0.022	1-101-005-00
12	1-102-949-00	82	1-102-971-00	560	1-102-115-00	0.047	1-101-006-00
13	1-102-950-00	91	1-102-972-00	680	1-102-116-00		
15	1-102-951-00	100	1-102-973-00	820	1-102-117-00		
16	1-102-952-00	110	1-102-815-00				
18	1-102-953-00	120	1-102-816-00				
20	1-102-958-00	130	1-101-081-00				

0.001μF = 1,000pF

MYLAR CAPACITORS

RATING

CAP. (μF)	50 VOLT.	100 VOLT.	200 VOLT.	CAP. (μF)	50 VOLT.	100 VOLT.	200 VOLT.	CAP. (μF)	50 VOLT.	100 VOLT.	200 VOLT.
	PART No.	PART No.	PART No.		PART No.	PART No.	PART No.		PART No.	PART No.	PART No.
0.001	1-108-227-00	1-108-365-00	1-108-409-00	0.01	1-108-239-00	1-108-377-00	1-108-421-00	0.1	1-108-251-00	1-108-389-00	1-108-433-00
0.0012	1-108-351-00	1-108-366-00	1-108-410-00	0.012	1-108-357-00	1-108-378-00	1-108-422-00	0.12	1-108-363-00	1-108-390-00	1-108-434-00
0.0015	1-108-228-00	1-108-367-00	1-108-411-00	0.015	1-108-240-00	1-108-379-00	1-108-423-00	0.15	1-108-252-00	1-108-391-00	1-108-435-00
0.0018	1-108-352-00	1-108-368-00	1-108-412-00	0.018	1-108-358-00	1-108-380-00	1-108-424-00	0.18	1-108-364-00	1-108-392-00	1-108-436-00
0.0022	1-108-230-00	1-108-369-00	1-108-413-00	0.022	1-108-242-00	1-108-381-00	1-108-425-00	0.22	1-108-254-00	1-108-393-00	1-108-437-00
0.0027	1-108-353-00	1-108-370-00	1-108-414-00	0.027	1-108-359-00	1-108-382-00	1-108-426-00	0.27	1-108-854-00		
0.0033	1-108-232-00	1-108-371-00	1-108-415-00	0.033	1-108-244-00	1-108-383-00	1-108-427-00	0.33	1-108-855-00		
0.0039	1-108-354-00	1-108-372-00	1-108-416-00	0.039	1-108-360-00	1-108-384-00	1-108-428-00	0.39	1-108-856-00		
0.0047	1-108-234-00	1-108-373-00	1-108-417-00	0.047	1-108-246-00	1-108-385-00	1-108-429-00	0.47	1-108-857-00		
0.0056	1-108-355-00	1-108-374-00	1-108-418-00	0.056	1-108-361-00	1-108-386-00	1-108-430-00				
0.0068	1-108-237-00	1-108-375-00	1-108-419-00	0.068	1-108-249-00	1-108-387-00	1-108-431-00				
0.0082	1-108-356-00	1-108-376-00	1-108-420-00	0.082	1-108-362-00	1-108-388-00	1-108-432-00				

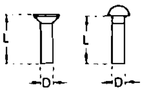
1/4 WATT CARBON RESISTORS

Ω	Part No.	Ω	Part No.	Ω	Part No.	Ω	Part No.	Ω	Part No.	Ω	Part No.	Ω	Part No.
1.0	1-246-401-00	10	1-246-425-00	100	1-246-449-00	1.0k	1-246-473-00	10k	1-246-497-00	100k	1-246-521-00	1.0M	1-246-545-00
1.1	1-246-402-00	11	1-246-426-00	110	1-246-450-00	1.1k	1-246-474-00	11k	1-246-498-00	110k	1-246-522-00	1.1M	1-210-814-00
1.2	1-246-403-00	12	1-246-427-00	120	1-246-451-00	1.2k	1-246-475-00	12k	1-246-499-00	120k	1-246-523-00	1.2M	1-210-815-00
1.3	1-246-404-00	13	1-246-428-00	130	1-246-452-00	1.3k	1-246-476-00	13k	1-246-500-00	130k	1-246-524-00	1.3M	1-210-816-00
1.5	1-246-405-00	15	1-246-429-00	150	1-246-453-00	1.5k	1-246-477-00	15k	1-246-501-00	150k	1-246-525-00	1.5M	1-210-817-00
1.6	1-246-406-00	16	1-246-430-00	160	1-246-454-00	1.6k	1-246-478-00	16k	1-246-502-00	160k	1-246-526-00	1.6M	1-210-818-00
1.8	1-246-407-00	18	1-246-431-00	180	1-246-455-00	1.8k	1-246-479-00	18k	1-246-503-00	180k	1-246-527-00	1.8M	1-210-819-00
2.0	1-246-408-00	20	1-246-432-00	200	1-246-456-00	2.0k	1-246-480-00	20k	1-246-504-00	200k	1-246-528-00	2.0M	1-210-820-00
2.2	1-246-409-00	22	1-246-433-00	220	1-246-457-00	2.2k	1-246-481-00	22k	1-246-505-00	220k	1-246-529-00	2.2M	1-210-821-00
2.4	1-246-410-00	24	1-246-434-00	240	1-246-458-00	2.4k	1-246-482-00	24k	1-246-506-00	240k	1-246-530-00	2.4M	1-244-754-00
2.7	1-246-411-00	27	1-246-435-00	270	1-246-459-00	2.7k	1-246-483-00	27k	1-246-507-00	270k	1-246-531-00	2.7M	1-244-755-00
3.0	1-246-412-00	30	1-246-436-00	300	1-246-460-00	3.0k	1-246-484-00	30k	1-246-508-00	300k	1-246-532-00	3.0M	1-244-756-00
3.3	1-246-413-00	33	1-246-437-00	330	1-246-461-00	3.3k	1-246-485-00	33k	1-246-509-00	330k	1-246-533-00	3.3M	1-244-757-00
3.6	1-246-414-00	36	1-246-438-00	360	1-246-462-00	3.6k	1-246-486-00	36k	1-246-510-00	360k	1-246-534-00	3.6M	1-244-758-00
3.9	1-246-415-00	39	1-246-439-00	390	1-246-463-00	3.9k	1-246-487-00	39k	1-246-511-00	390k	1-246-535-00	3.9M	1-244-759-00
4.3	1-246-416-00	43	1-246-440-00	430	1-246-464-00	4.3k	1-246-488-00	43k	1-246-512-00	430k	1-246-536-00	4.3M	1-244-760-00
4.7	1-246-417-00	47	1-246-441-00	470	1-246-465-00	4.7k	1-246-489-00	47k	1-246-513-00	470k	1-246-537-00	4.7M	1-244-761-00
5.1	1-246-418-00	51	1-246-442-00	510	1-246-466-00	5.1k	1-246-490-00	51k	1-246-514-00	510k	1-246-538-00	5.1M	1-244-762-00
5.6	1-246-419-00	56	1-246-443-00	560	1-246-467-00	5.6k	1-246-491-00	56k	1-246-515-00	560k	1-246-539-00		
6.2	1-246-420-00	62	1-246-444-00	620	1-246-468-00	6.2k	1-246-492-00	62k	1-246-516-00	620k	1-246-540-00		
6.8	1-246-421-00	68	1-246-445-00	680	1-246-469-00	6.8k	1-246-493-00	68k	1-246-517-00	680k	1-246-541-00		
7.5	1-246-422-00	75	1-246-446-00	750	1-246-470-00	7.5k	1-246-494-00	75k	1-246-518-00	750k	1-246-542-00		
8.2	1-246-423-00	82	1-246-447-00	820	1-246-471-00	8.2k	1-246-495-00	82k	1-246-519-00	820k	1-246-543-00		
9.1	1-246-424-00	91	1-246-448-00	910	1-246-472-00	9.1k	1-246-496-00	91k	1-246-520-00	910k	1-246-544-00		

HARDWARE NOMENCLATURE

Screw:

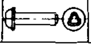
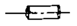
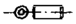
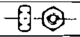
– P 3 x 10
L: Length in mm
D: Diameter in mm
Type of head
Indicated slotted-head only.
Unless otherwise indicated, it means
cross-recessed head (Phillips type).



Nut, Washer, Retaining ring:

N 3
Diameter of usable screw or shaft
Reference designation

Reference Designation	Shape	Description	Remarks
SCREWS			
P		pan-head screw	binding-head (B) screw for replacement
PWH		pan-head screw with washer face	binding-head (B) screw and flat washer for replacement
PS PSP		pan-head screw with spring washer	binding-head (B) screw and spring washer for replacement
PSW PSPW		pan-head screw with spring and flat washers	binding-head (B) screw and spring and flat washers for replacement
R		round-head screw	binding-head (B) screw for replacement
K		flat-countersunk-head screw	
RK		oval-countersunk-head screw	
B		binding-head screw	
T		truss-head screw	binding-head (B) screw for replacement
F		flat-fillister-head screw	
RF		fillister-head screw	
BV		brazier-head screw	

Reference Designation	Shape	Description	Remarks
SELF-TAPPING SCREWS			
TA		self-tapping screw	ex: TA, P 3 x 10
PTP		pan-head self-tapping screw	binding-head self-tapping (TA, B) screw for replacement
PTPWH		pan-head self-tapping screw with washer face	binding-head self tapping (TA, B) screw and flat washer for replacement
PTTWH		pan-head thread-rolling screw with washer face	binding-head (B) screw and flat washer for replacement
SET SCREWS			
SC		set screw	
SC		hexagon-socket set screw	ex: SC 2.6 x 4, hexagon socket
NUT			
N		nut	
WASHERS			
W		flat washer	
SW		spring washer	
LW		internal-tooth lock washer	ex: LW3, internal
LW		external-tooth lock washer	ex: LW3, external
RETAINING RINGS			
E		retaining ring	
G		grip-type retaining ring	

Sony Corporation
Audio & Video Group © 1982

9-972-144-03

English
82F0514-1
Printed in Japan